Multi-Jurisdictional Hazard Mitigation Plan: City of San Diego Annex

San Diego County, California

2023

The City *of* SAN DIEGO

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1. SECTION ONE: Determine the Planning Area & Resources

1.1 Planning Area: City of San Diego

The City of San Diego is the central and largest city in the San Diego Operational Area. (The Operational Area is defined by the geographical boundaries of San Diego County.) The City's population of approximately 1.43 million makes it the eighth largest in the nation and the second largest in California. Over 42% of the County of San Diego's population resides within the City of San Diego. It is the southernmost major metropolitan area in California, encompassing the world's busiest international border. According to U.S. Customs and Border Protection, 55.6 million people entered the City of San Diego from Mexico in 2018 utilizing the two land ports of entry (San Ysidro and Otay Mesa).

The City of San Diego is made up of 342.4 square miles of land area and 90 square miles of water area that includes San Diego Bay and Mission Bay. With over 53 miles of shoreline (ocean and bay), the City is bounded on the west by the Pacific Ocean and on the south by the international border with Mexico. Smaller cities and unincorporated areas lie to the east; these areas are bounded by belts of mountains and desert. The Camp Pendleton Marine Corps Base and Riverside County are located beyond smaller incorporated cities to the north. The community of San Ysidro is geographically isolated from the rest of the City of San Diego. It is physically connected to the City by a narrow strip of land along the coast.

The terrain varies and includes coastal areas consisting of sea level beaches to rocky cliff interfaces with the Pacific Ocean, extensive canyon systems with thick vegetation that penetrate urbanized areas, and mountainous areas that define watersheds and are the source of streams, rivers, and dammed reservoirs.

Hazard Assessment

The San Diego region is classified as a Mediterranean climate with hot, sunny, dry, and rainless summers with cooler, wetter winters although precipitation is lower than any other part of the U.S. west coast. A mountain barrier crosses north to south through the eastern half of the County separating desert to the east and semi-arid coastal plains to the west. The highlands on the coastal side of the barrier are a significant source of water that feed streams of varying capacities as they descend seaward to the Pacific Ocean.

The City of San Diego is exposed and at risk for multiple hazards, all of which have the potential to disrupt communities, damage infrastructure, and create casualties. Notable risks for our region include wildfires, floods, landslides, drought, earthquakes, tropical storms, hurricanes, tsunamis, and freezes. A significant and well-established military footprint with supporting industrial sectors to include a significant biomedical technology and research industry further expose our region to the risk of chemical, biological, radiological, nuclear, and kinetic incident as a result of terrorism, war, or accident. Additional disaster risks may be realized from a hazardous materials incident, conflagration, water or air pollution, major transportation accident, water, gas or energy shortage, nuclear power plant accident, or civil disorder. Since 1965 in the County of San Diego, there have been 48 federal disasters declarations[1] (28 fires, 9 floods, 5 severe storms, 2 severe freezes, 2 for the COVID-19 Pandemic, 1 hurricane (evacuation from Katrina), and 1 severe coastal storm). Out of those 48 disasters, 45 qualified for various FEMA Public Assistance Programs and 22 received support from FEMA's Individual Assistance and/or Households Program.

[1] https://www.fema.gov/openfema-data-page/disaster-declarations-summaries-v2

1.2. Community Rating System Requirements

The Community Rating System (CRS) is a FEMA program and rewards communities that go beyond the minimum standards for floodplain management under the National Flood Insurance Program (NFIP). Communities can potentially improve their Community Rating System and lower NFIP premiums by developing a CRS Plan. **The City of San Diego participates in NFIP.**

Information for the National Flood Insurance Program can be found at: https://www.fema.gov/flood-insurance

Community Rating System (CRS) Planning Steps	Local Mitigation Planning Handbook Tasks (44 CFR Part 201)
Step 1. Organize	**Task 1:** Determine the Planning Area and Resources **Task 2:** Build the Planning Team 44 CFR 201.6(c)(1)
Step 2. Involve the public	**Task 3:** Create an Outreach Strategy 44 CFR 201.6(b)(1)
Step 3. Coordinate	**Task 4:** Review Community Capabilities 44 CFR 201.6(b)(2) & (3)
Step 4. Assess the hazard	**Task 5:** Conduct a Risk Assessment 44 CFR 201.6(c)(2)(i) 44 CFR 201.6(c)(2)(ii) & (iii)
Step 5. Assess the problem	
Step 6. Set goals	**Task 6:** Develop a Mitigation Strategy 44 CFR 201.6(c)(3)(i) 44 CFR 201.6(c)(3)(ii) 44 CFR 201.6(c)(3)(iii)
Step 7. Review possible activities	
Step 8. Draft an action plan	
Step 9. Adopt the plan	**Task 8:** Review and Adopt the Plan 44 CFR 201.6(c)(5)
Step 10. Implement, evaluate, revise	**Task 7:** Keep the Plan Current **Task 9:** Create a Safe and Resilient Community 44 CFR 201.6(c)(4)

TABLE 1: FEMA LOCAL MITIGATION PLANNING HANDBOOK WORKSHEET 1.1 DESCRIBES THE CRS REQUIREMENTS MET BY THE SAN DIEGO COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN.

Any jurisdiction or special district may participate in the hazard mitigation planning process. However, to request FEMA approval, each of the local jurisdictions must meet all requirements of 44 CFR §201.6. In addition to the requirement for participation in the process, the Federal regulation specifies the following requirements for multi-jurisdictional plans:

- The risk assessment must assess each jurisdiction's risk where they may vary from the risks facing the entire planning area. (44 CFR §201.6(c)(2)(iii))
- There must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan. (44 CFR §201.6(c)(3)(iv))

- Each jurisdiction requesting approval of the plan must document that is has been formally adopted. (44 CFR §201.6(c)(5))

The County of San Diego Hazard Mitigation Base Plan lists the jurisdictions that participated in the plan and are seeking plan approval, including for this plan on behalf of the City of San Diego. The San Diego County Multi-Jurisdictional Hazard Mitigation Plan and annexes meet all requirements.

2. SECTION TWO: Build the Planning Team

2.1. Planning Participants

- Kurt Grube – Sergeant, San Diego Police Department
- Darren Bennett – IT Security Department Deputy Director
- Roy Kirby – Deputy Director, Public Works
- Gene Matter – Assistant Deputy Director, Transportation and Storm Water
- Anthony Tosca – Deputy Chief/Fire Marshall San Diego Fire Rescue
- James Holmes – Advanced Planning, Office of Emergency Services
- Jennifer Dymicki – Advanced Planning, Office of Emergency Services
- Eugene Ruzzini – Provisional Program Manager, Office of Emergency Services
- Tiffany Allen – Senior Homeland Security Coordinator, Office of Emergency Services
- Hannah Chasteene – Senior Homeland Security Coordinator, Office of Emergency Services
- Mehdi Shadyab – Senior Structural Engineer, Development Services
- Eriberto Valdez - Planning
- Bill White – Manager Security and Emergency Response Public Utilities
- Danielle Nourie-Burns – Assistant Grants Administrator Park and Recreation
- Mark Zu Hone – Associate Civil Engineer, Environmental Services
- Andrew Kleis – Deputy Director Transportation Storm Water
- Erin Williams – Associate Engineer Transportation Storm Water

2.2. Planning Process

The goals and objectives were developed by considering the risk assessment findings, localized hazard identification with loss/exposure estimates, and an analysis of the jurisdiction's current capabilities assessment. These preliminary goals, objectives and actions were developed to represent a vision of long-term hazard reduction or enhancement capabilities.

The Local Planning Group (LPG) identified current capabilities available for implementing hazard mitigation activities. The Capability Assessment (Assessment) portion of the jurisdictional hazard mitigation plan identifies administrative, technical, legal and fiscal capabilities. This includes a summary of departments and their responsibilities associated to hazard mitigation planning as well as codes, ordinances, and plans already in place associated to hazard mitigation and planning. The second part of the Assessment provides San Diego's fiscal capabilities that may be applicable to providing financial resources to implement identified

mitigation action items. *See the San Diego County Multi-Jurisdictional Hazard Mitigation Plan's Section Two for details about the county-wide Planning Process.*

3. SECTION THREE: Create an Outreach Strategy

See the *San Diego County Multi-Jurisdictional Hazard Mitigation Plan's* Section Three for details about the county-wide outreach strategy.

4. SECTION FOUR: Review Community Capabilities

Local mitigation capabilities are existing authorities, policies, programs, and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities and must be included in a hazard mitigation plan by the planning team.
The planning team also may identify additional types of capabilities relevant to mitigation planning.

4.1. Capability Assessment

The primary types of capabilities for reducing long-term vulnerability through mitigation planning are:

- Planning and regulatory
- Administrative and technical
- Financial
- Education and outreach

4.1.1. Planning and Regulatory

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards. Please indicate which of the following your jurisdiction has in place:

Plans	Yes/No Year	Does the plan address hazards? Does the plan identify projects to include in the mitigation strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	YES	The City of San Diego General Plan serves as its Master Plan. (Adopted in 2008 with a 20-to-30-year horizon for City growth and development, sections are updated as needed). The General Plan and associated Action Plan contain policies that place consideration of future development, hazard assessment and limit development in areas with identified hazards. The County of San Diego maintains the County of San Diego General Plan, which includes the Safety Element and references back to the Multi-Jurisdictional Hazard Mitigation Plan, establishes policies and programs to protect the community from risks associated with regional identified hazards and threats, natural and human caused.
Capital Improvements Plan	YES	The CIP will be used to implement mitigation actions as new projects are identified funded.

Economic Development Plan	YES	The Plan was approved by the City Council; it does not appear to address hazards or mitigation actions.
Local Emergency Operations Plan	YES	The City of San Diego EOP is developed to be inclusive of multiple hazards. The City EOP includes annexes in the following relevant categories: Emergency Management, Fire and Law Mutual Aid, Multi-Causality Operations, Public Health Operations, and Terrorism.
Continuity of Operations Plan	YES	The City of San Diego requires through Administrative Regulation that all City functional organizations (i.e., Departments/offices/agencies) maintain a Continuity of Operation plan (COOP) that will provide for an "all-hazards" planning approach, encompassing preparation and planning for any natural and man-made hazards, and ranges from planned events to large-scale disasters. Our Office of Emergency Services administers the City's COOP Program that coordinates annual updates and maintains the primary repository for all current COOP's as a resource for leadership and EOC Activations.
Transportation Plan	YES	The Planning department maintains City Transportation plans which are integrated into the City General Plan.
Stormwater Management Plan	YES	The current plan identifies mitigation strategies and can be used to implement mitigation activities.
Community Wildfire Protection Plan	YES	Several wildfire-prone communities in the City of San Diego have initiated and received approval on their community-led CWPP. The International Fire Chiefs Association released their guide to help develop and implement a Community Wildfire Preparedness Plan in communities and across the country. It has a local community level approach to include code, development review, ordinances and local authority, and is used by leaders in the Fire Service, including subject matter experts, and local, state, and federal officials.
Real estate disclosure requirements	YES	California Natural Hazard Disclosure (NHD) report was put into effect in 1998 under California Civil Code 1103. required to disclose Special Flood Hazard, Dam Inundation, Very High Fire, Wildland Fire, Earthquake Fault Zone, and Seismic Hazard areas.
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	YES	There is an adopted Climate Protection Plan in place. This Plan will be replaced by the Climate Action Plan currently in draft form.

How can these capabilities be expanded and improved to reduce risk?
Based on the capability assessment, the City of San Diego has existing regulatory, administrative/technical, and fiscal mechanisms in place that facilitate hazard mitigation. In addition to these existing capabilities, there are opportunities for the City to expand or improve on these policies and programs to further protect the community. Future opportunities for regulatory enhancement should focus on compliance with Assembly Bill 2140 and any future regulatory updates, including amending the City of San Diego Emergency Operations Plan and associated plans included in the table above.

TABLE 2: FEMA LOCAL MITIGATION PLANNING HANDBOOK WORKSHEET 4.1 DATA.

4.1.2. Administrative and Technical

Administrative and technical capabilities include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions. For smaller jurisdictions without local staff resources, if there are public resources at the next higher-level government that can provide technical assistance, indicate so in your comments:

Administration	Yes/No	Describe capability Is coordination effective?
Planner(s) or engineer(s) with knowledge of land development and land management practices	YES	Development Services Division is liaison to the Planning Commission. The Planning Department works closely with the Planning Commission and other plans and policies related to land development. These plans address climate change and sea level rise and often include specific recommendations for adoption and mitigation strategies for identified hazards.
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	YES	Conduct inspections of private and public construction projects inspecting materials and workmanship to ensure compliance with approved plans and specifications, inspect conditions prior to the start of construction, during construction and upon completion.
Planners or Engineer(s) with an understanding of natural and/or manmade hazards	YES	City of San Diego Planners and Engineers understand the importance of mitigation measures in their respective area of expertise as it relates to both natural and manmade hazards.
Mitigation Planning Committee	YES	City of San Diego LPG participates in the City-internal Committee as well as engage/participate with the San Diego County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) Planning Team.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	YES	The City employs Public Works, Transportation and Stormwater crews that inspect and maintain public drainage facilities and perform maintenance as necessary to ensure optimal conveyance. They employ proactive measures to mitigate potential hazards caused by weather or other occurrences to include tree trimming, and vegetation/brush clearance for our designated Wildland Urban Interface (WUI) zones.

Mutual aid agreements	YES	California legislates mutual aid throughout the State to provide a systematic mobilization, organization, and operation of necessary fire, rescue, and hazardous material resources of the state in mitigating the effects of disasters outlined by the California Emergency Services Act which further designates, through the Ca Office of Emergency Services (Cal OES), 6 Mutual Aid regions throughout the State. San Diego, in region VI, participates in Region I/VI Medical Health Operational Area (MHOAC) Mutual Aid agreement. Automatic Aid and Mutual Aid agreements are established between San Diego mutual zones (North/Metro/Central/East); to include mutual aid agreement between Public Works departments in the San Diego Region.
Staff	**Yes/No FT/PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation?** **Is coordination between agencies and staff effective?**
Chief Building Official	YES / FT	YES
Floodplain Administrator	YES / FT	YES
Emergency Manager	YES / FT	YES
Surveyors	YES / FT	YES
Staff with education or expertise to assess the community's vulnerability to hazards	YES / FT	YES
Community Planner	YES / FT	YES
Scientists familiar with the hazards of the community	NO	The City of San Diego leverages the County of San Diego for Scientist OA support. The County has scientists on staff in several departments to assist with hazard identification and mitigation.
Civil Engineer	YES / FT	YES
Personnel skilled in GIS and/or HAZUS	YES / FT	YES
Grant writers	YES / FT	YES

TABLE 3: FEMA LOCAL MITIGATION PLANNING HANDBOOK WORKSHEET 4.1 DATA CONTINUED.

Technical	**Yes/No**	**Describe capability** **Has capability been used to assess/mitigate risk in the past?**
Warning Systems/services (Reverse 9-1-1, outdoor warning signals)	YES	The City operates and utilizes shared services contracted through the OA. The County has multiple notification systems and protocols used during emergency events. AlertSanDiego is the opt-in notification system, WEA (Wireless Emergency Alert) is coordinated and used, as well as the *SDEmergency* App and website.
Hazard data and information	YES	Maps identifying type and location of hazards in relation to specific sites
Grant writing	YES	Mitigation grants (HMA / HMGP) Grants are applied for by multiple departments within the City (Flood Authority / OES / PDS). All of which have grant writing experience.
HAZUS analysis	YES	HAZUS Analysis is utilized for the Hazard Mitigation Plan.
How can these capabilities be expanded and improved to reduce risk?		
Based on the capability assessment, the City of San Diego has existing regulatory, administrative/technical, fiscal mechanisms in place that help to mitigate hazards. In addition to these existing capabilities, there are opportunities for the City to expand or improve on these policies and programs to further protect the community. Future enhancements may include providing hazard training for staff or hazard mitigation grant funding in partnership with the County of San Diego and CalOES. Existing City emergency management staff are aware of the benefits of participating in training and webinars offered by Cal OES Hazard Mitigation Assistance (HMA) Team related to HMGP opportunities, and other funding programs. Other opportunities may be related to coordinating and educating key stakeholders in the City.		

4.1.3. Financial

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation:

Funding Resource	Access/ Eligibility (Yes/No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Community Development Block Grants (CDBG)	YES	This is a dedicated Federal grant that benefits census tracts with 51% of the population being low or moderate income according to the 2010 census tract. The eligibility requirements may limit the possible uses for hazard mitigation.
Capital improvements project funding	YES	Capital improvement projects and needs are presented to Capital Improvements Program Review and Advisory Committee (CIPRAC) for prioritization and funding determination.
Authority to levy taxes for specific purposes	YES	Levying a tax for specific purpose but would require public vote with 2/3 majority.
Fees for water, sewer, gas, or electric service	YES	The uses of this funding source may be possible if it pertains to hazards associated with water, sewer, gas, or electrical services.
Impact fees for homebuyers or developers for new developments/homes	YES	Special Drainage Area Developer Fees provided to Flood Control District.
Incur debt through general obligation bonds	YES	The use of this funding mechanism may be limited due to financial capacity and competing Citywide projects.
Incur debt through special tax and revenue bonds	YES	The use of this funding mechanism may be limited due to financial capacity and competing Citywide projects.
Incur debt through private activity bonds	YES	The Office of Emergency Services can discuss the possible use of this funding resource with Financial Management and debt management.

How can these capabilities be expanded and improved to reduce risk?
Based on the capability assessment, the City of San Diego has existing regulatory, administrative/technical, fiscal mechanisms in place that help to mitigate hazards. In addition to these existing capabilities, there are opportunities for the City to expand or improve on these policies and programs to further protect the community. The City can update other plans, such as their Capital Improvement Project (CIP) to incorporate hazard information and include hazard mitigation actions and climate adaptation strategies that relate to infrastructure systems resiliency. Once projects related to hazard mitigation are approved, the recent CIP can be shared with key community partners and stakeholders. Additionally, the City should apply for HMGP grants to fund implementation costs associated with key CIP projects, and related projects in the City's mitigation strategy. These fiscal capabilities may be supported by City staff or augmented with consultant staff.

TABLE 4: FEMA LOCAL MITIGATION PLANNING HANDBOOK WORKSHEET 4.1 DATA CONTINUED.

4.1.4. Education and Outreach

Identify education and outreach programs and methods already in place that could be used to implement mitigation activities and communicate hazard-related information:

Program/Organization	Yes/No	Describe program/organization and how relates to disaster resilience and mitigation. Could the program/organization help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access, and functional needs populations, etc.	YES	The City has recognized Community Planning Groups for each community planning area. These groups are made up of property owners, business owners, and renters within specific areas. They meet regularly and are very familiar with their communities and could be useful in implementing future disaster mitigation activities.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	YES	The City of San Diego has several community educational programs in many of its departments, as well as our Communication & Engagement Department designated as our lead in public outreach and education related to many topics benefiting our citizens health, safety and security. Those programs cover a range of education topics from water use, brush abatement and emergency preparedness.
Natural disaster or safety related school programs	YES	The City of San Diego Office of Emergency Services employs 1 fulltime Urban Area Security Initiative (UASI) training position to facilitate the full spectrum of emergency preparedness and security training opportunities that encompass natural disaster response training. Both our Fire and Police Departments provide disaster and safety programs for local schools. Utilized services through coordination with the

Natural disaster or safety related school programs		County of San Diego: County Department of Environmental Health & Quality (DEHQ) does educational outreach to public schools on environmental education.
StormReady certification	YES	Utilized services through coordination with the County of San Diego: The National Weather Service Storm Ready Program was created to help communities develop disaster mitigation plans and prepare for extreme weather events. San Diego County Flood Control District's (SDCFCD) applied for a Storm Ready certification in 2018 and received it shortly afterward. SDCFCD's ALERT flood warning system has over 450 sensors continuously monitoring and transmitting hydrologic and weather information to the base station at the Kearny Mesa Weather Center. During precipitation events, Flood Control staff monitor weather conditions and ensure flood warning system integrity 24/7.
Firewise Communities certification	YES	Firewise Certification is initiated by several local communities within San Diego and supported by the City. Firewise Communities is a program of the National Fire Protection Association. Firewise offers information and free resources to help communities protect homes and lives against the risks of wildfire.
Public-private partnership initiatives addressing disaster-related issues	YES	Continued coordination and partnership developments for disaster response and mitigation is primarily focused through our City Office of Emergency Services and Fire Department. They have established relationships with multiple non-profit relief agencies such as the Red Cross. Planning and coordination with private industry to include San Diego Gas and Electric's Community Fire Safety Program and regional Weather Awareness System. Establishment of a Community Emergency Response Team (CERT) and continued engagement with local community groups to provide education and mitigation information for wildfire and WUI safety.
How can these capabilities be expanded and improved to reduce risk?		
Based on the capability assessment, the City of San Diego has existing regulatory, administrative/technical, fiscal mechanisms in place that help to mitigate hazards. In addition to these existing capabilities, there are opportunities for the City to expand or improve on these policies and programs to further protect the community. The City can also expand their outreach capabilities related to hazard mitigation plans. Specific enhancements may include continued public involvement through social media and public engagement focused on project successes related to our hazard mitigation strategy. Analysis of current focus for outreach efforts to ensure equality of messaging and identify/better understand potential gaps in education and outreach to a diverse population intermingled by advocacy and special interest groups.		

TABLE 5: FEMA LOCAL MITIGATION PLANNING HANDBOOK WORKSHEET 4.1 DATA CONTINUED.

4.2. Safe Growth Audit

Identify gaps in your community's growth guidance instruments and improvements that could be made to reduce vulnerability to future development:

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?	X	
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	X	
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	X	
Transportation		
1. Does the transportation plan limit access to hazard areas?	X	
2. Is transportation policy used to guide growth to safe locations?	X	
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?	X	

TABLE 6: FEMA LOCAL MITIGATION PLANNING HANDBOOK WORKSHEET 4.2 DATA.

Comprehensive Plan (continued)	Yes	No
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?	X	
2. Do environmental policies maintain and restore protective ecosystems?	X	
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?	X	
Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	X	
2. Is safety explicitly included in the plan's growth and development policies?	X	
3. Does the monitoring and implementation section of the plan cover safe growth objectives?	X	

TABLE 7: FEMA LOCAL MITIGATION PLANNING HANDBOOK WORKSHEET 4.2 DATA CONTINUED.

Zoning Ordinance	Yes	No
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	X	
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?	X	
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	X	
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?	X	
Subdivision Regulations	**Yes**	**No**
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?		X
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?		X
3. Do the regulations allow density transfers where hazard areas exist?		X

TABLE 8: FEMA LOCAL MITIGATION PLANNING HANDBOOK WORKSHEET 4.2 DATA CONTINUED.

Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?		X
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?	X	
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?		X
Other	**Yes**	**No**
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?		X
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	X	
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?		X
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?		X

TABLE 9: FEMA LOCAL MITIGATION PLANNING HANDBOOK WORKSHEET 4.2 DATA CONTINUED.

Questions were adapted from Godschalk, David R. Practice Safe Growth Audits, Zoning Practice, Issue Number 10, October 2009, American Planning Association.

4.2.1. Developments

A summary of development in hazard zones since 2018 is shown in the table below:

Year	Hazard-Non-Hazard	Non-Residential	Residential	Total
2018	**Hazard**	346	410	756
	Non-Hazard	3,349	4,044	7,393
2019	**Hazard**	389	215	604
	Non-Hazard	3,321	4,461	7,782
2020	**Hazard**	216	94	310
	Non-Hazard	2,330	2,937	5,267
2021	**Hazard**	199	130	329
	Non-Hazard	2,450	3,500	5,950
Total		12,600	15,791	28,391
"Hazard" for purposes of this document means permits issued on properties located within the following two map layers: "FEMA National Flood Hazard" and "CAL FIRE Fire Threat."				

Projects requiring building permits reviewed by the department are expected to comply with applicable regulations, including those designed to avoid or mitigate hazard based on the environment and factors related to natural disaster. With the exception of more people living in the City potentially exposed to natural hazards, these changes in development should not cause a significant increase in vulnerability.

4.3. National Flood Insurance Program (NFIP)

The City of San Diego is a participant in the National Flood Insurance Program.

As a participant in the National Flood Insurance Program (NFIP), a community develops capabilities for conducting flood mitigation activities. The hazard mitigation plan must describe each jurisdiction's participation in the NFIP. Participating communities must describe their continued compliance with NFIP requirements. The mitigation plan must do more than state that the community will continue to comply with the NFIP. Each jurisdiction must describe their floodplain management program and address how they will continue to comply with the NFIP requirements. The local floodplain administrator is often the primary source for this information.

Jurisdictions where FEMA has issued a floodplain map but are currently not participating in the NFIP may meet this requirement by describing the reasons why the community does not participate. Plan updates must meet the same requirements and document any change in floodplain management programs.

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	Total Policies: 2,970 Total Premium: $2,645,433 Total Coverage: $676,862,000

How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	FEMA NFIP or Insurance Specialist	Total Claims: 520 Total Claims Unpaid: $5,583,886 Number of Claims from Substantial Damage: Unknown
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	Exact number is not determined at this time, but not many
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	Open areas with no structures, specifically in TJ River areas.
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	No
Is floodplain management an auxiliary function?	City Staff	No. It is a function of the permitting and development process.
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	No
What are the barriers to running an effective NFIP program in the community, if any?	City Staff	The existing program meets the physical requirements in the City.
Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	Yes
Are there any outstanding compliance issues (i.e., current violations)?	Community Records	No
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?	Community Records	January 2008
Is a CAV or CAC scheduled or needed?	City Staff	CAV is not scheduled and no immediate need for it.

TABLE 10: FEMA LOCAL MITIGATION PLANNING HANDBOOK WORKSHEET 4.3 DATA.

NFIP Topic	Source of Information	Comments
Regulation		
When did the community enter the NFIP?	Community Status Book https://www.fema.gov/cis/CA.html	8/15/1983 City of San Diego 6/15/1984 County of San Diego
Are the FIRMs digital or paper?	Community FPA	Digital

Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	They meet and exceed the FEMA and State requirements. The floodway increase is set to zero.
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual https://www.fema.gov/flood-insurance/work-with-nfip/manuals#flood-insurance	No
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	No
What is the community's CRS Class Ranking?	Flood Insurance Manual https://www.fema.gov/flood-insurance/work-with-nfip/manuals#flood-insurance	No
What categories and activities provide CRS points and how can the class be improved?		No
Does the plan include CRS planning requirements	Community FPA, FEMA CRS Coordinator, ISO representative	No

TABLE 11: FEMA LOCAL MITIGATION PLANNING HANDBOOK WORKSHEET 4.3 DATA CONTINUED.

5. SECTION FIVE: Conduct a Risk Assessment

The planning team conducts a risk assessment to determine the potential impacts of hazards to the people, economy, and built and natural environments of the community. The risk assessment provides the foundation for the rest of the mitigation planning process, which is focused on identifying and prioritizing actions to reduce risk to hazards.

In addition to informing the mitigation strategy, the risk assessment also can be used to establish emergency preparedness and response priorities, for land use and comprehensive planning, and for decision making by elected officials, city and county departments, businesses, and organizations in the community.

5.1. Hazards Summary

Summarize hazard description information and identify which hazards are most significant to the planning area:

Summary of Potential Hazard-Related Exposure/Loss in San Diego

		Residential		Commercial		Critical Facilities	
Hazard Type	**Exposed Population**	**Number of Residential Buildings**	**Potential Exposure/ Loss for Residential Buildings (x $1,000)**	**Number of Commercial Buildings**	**Potential Exposure/ Loss for Commercial Buildings (x $1,000)**	**Number of Critical Facilities**	**Potential Exposure for Critical Facilities (x $1,000)**
Coastal Storm / Erosion	9322	4	1,554.40	3	907.05	1	719.79
Sea Level Rise (Coastal Flooding)	5,490	108	41,968.80	85	25,699.75	7	756.96
Dam Failure	89,183	32,128	12,484,940.80	4,597	1,389,902.95	292	4,022,035.15
Earthquake (Annualized Loss - Shaking & liquefaction components)	1,184,880*	280,311*	108,900,823.50*	36,762*	11,114,990.70*	1,205*	48,264,575.85*
Floods (Loss)							
100 Year	35,523	4,976	1,933,673.60	733	221,622.55	154	1,794,012.50
500 Year	68,368	14,269	5,544,933.40	1,706	515,809.10	218	3,155,540.50
Rain-Induced Landslide							
High Risk	1,222	9	3,496.50	0	0	0	0
Moderate Risk	560	4	1,554.00	0	0	0	0
Tsunami	34,592	5,749	2,234,061.40	875	264,556.25	13	797,932.50
Wildfire/ Structure Fire							
New Fire (High Results)	30,619	9,281	3,605,668.50	1,427	431,453.45	20	483,228.00
New Fire (Very High)	341,251	123,699	48,069,431.40	3,517	1,063,364.95	430	26,339,631.35

*Represents Rose Canyon Event

Hazard	Location (Geographic Area Affected)	Maximum Probable Extent (Magnitude/Strength)	Probability of Future Events	Overall Significance Ranking
Avalanche	Negligible	Weak	Unlikely	Low
Hazardous Materials/CBRNE Threats	Limited	Moderate	Occasional	Low
Climate Change	Extensive	Extreme	Highly Likely	Medium
Dam Failure	Negligible	Weak	Unlikely	Low
Drought	Limited	Moderate	Likely	Medium
Earthquake	Extensive	Severe	Occasional	Medium
Coastal Storms/Erosion	Negligible	Weak	Unlikely	Low
Expansive Soils	Negligible	Weak	Unlikely	Low
Extreme Cold	Negligible	Weak	Unlikely	Low
Extreme Heat	Significant	Moderate	Likely	Medium
Flood	Limited	Moderate	Likely	Medium
Hail	Negligible	Weak	Unlikely	Low
Hurricane	Negligible	Weak	Unlikely	Low
Landslide	Limited	Weak	Occasional	Low
Lightning	Limited	Weak	Occasional	Low
Pandemic	Extensive	Extreme	Occasional	Medium
Sea Level Rise	Negligible	Weak	Unlikely	Low
Severe Wind	Limited	Weak	Occasional	Medium
Severe Winter Weather	Negligible	Moderate	Occasional	Low
Storm Surge	Negligible	Weak	Unlikely	Low
Subsidence	Negligible	Weak	Unlikely	Low
Terrorism / Cyber Terrorism	Extensive	Extreme	Occasional	Medium
Tornado	Negligible	Weak	Unlikely	Low
Tsunami	Negligible	Weak	Unlikely	Low
Wildfire/Structure Fire	Limited	Moderate	Likely	Medium

TABLE 12: FEMA LOCAL MITIGATION PLANNING HANDBOOK WORKSHEET 5.1 DATA.

Definitions for Classifications

Location (Geographic Area Affected)

- **Negligible:** Less than 10 percent of planning area or isolated single-point occurrences
- **Limited:** 10 to 25 percent of the planning area or limited single-point occurrences
- **Significant:** 25 to 75 percent of planning area or frequent single-point occurrences
- **Extensive:** 75 to 100 percent of planning area or consistent single-point occurrences

Maximum Probable Extent (Magnitude/Strength based on historic events or future probability)

- **Weak:** Limited classification on scientific scale, slow speed of onset or short duration of event, resulting in little to no damage
- **Moderate:** Moderate classification on scientific scale, moderate speed of onset or moderate duration of event, resulting in some damage and loss of services for days
- **Severe:** Severe classification on scientific scale, fast speed of onset or long duration of event, resulting in devastating damage and loss of services for weeks or months
- **Extreme:** Extreme classification on scientific scale, immediate onset or extended duration of event, resulting in catastrophic damage and uninhabitable conditions

Hazard	Scale / Index	Weak	Moderate	Severe	Extreme
Drought	Palmer Drought Severity Index3	-1.99 to +1.99	-2.00 to -2.99	-3.00 to -3.99	-4.00 and below
Earthquake	Modified Mercalli Scale4	I to IV	V to VII	VII	IX to XII
	Richter Magnitude5	2, 3	4, 5	6	7, 8
Hurricane Wind	Saffir-Simpson Hurricane Wind Scale6	1	2	3	4, 5
Tornado	Fujita Tornado Damage Scale7	F0	F1, F2	F3	F4, F5

Probability of Future Events

- **Unlikely:** Less than 1 percent probability of occurrence in the next year or a recurrence interval of greater than every 100 years.
- **Occasional:** 1 to 10 percent probability of occurrence in the next year or a recurrence interval of 11 to 100 years.
- **Likely:** 10 to 90 percent probability of occurrence in the next year or a recurrence interval of 1 to 10 years
- **Highly Likely:** 90 to 100 percent probability of occurrence in the next year or a recurrence interval of less than 1 year.

Overall Significance

- **Low:** Two or more criteria fall in lower classifications, or the event has a minimal impact on the planning area. This rating is sometimes used for hazards with a minimal or unknown record of occurrences or for hazards with minimal mitigation potential.
- **Medium:** The criteria fall mostly in the middle ranges of classifications and the event's impacts on the planning area are noticeable but not devastating. This rating is sometimes used for hazards with a high extent rating but very low probability rating.
- **High:** The criteria consistently fall in the high classifications and the event is likely/highly likely to occur with severe strength over a significant to extensive portion of the planning area.

  - *Cumulative meteorological drought and wet conditions: https://www.ncei.noaa.gov*
  - *Earthquake magnitude as a logarithmic scale, measured by a seismograph, intensity, effect on population and structures: https://earthquake.usgs.gov*
  - *Hurricane and Tornado rating based on wind speed and associated damage: https://www.nhc.noaa.gov*

The LPG reviewed all the hazards above according to FEMA's overall significance rating. Based on FEMA's criteria for a "high" significant rating, the San Diego LPG did not rate any of its potential hazards as "high" due to the hazards not having potential to occur with severe strength over a significant to extensive portion of the planning area.

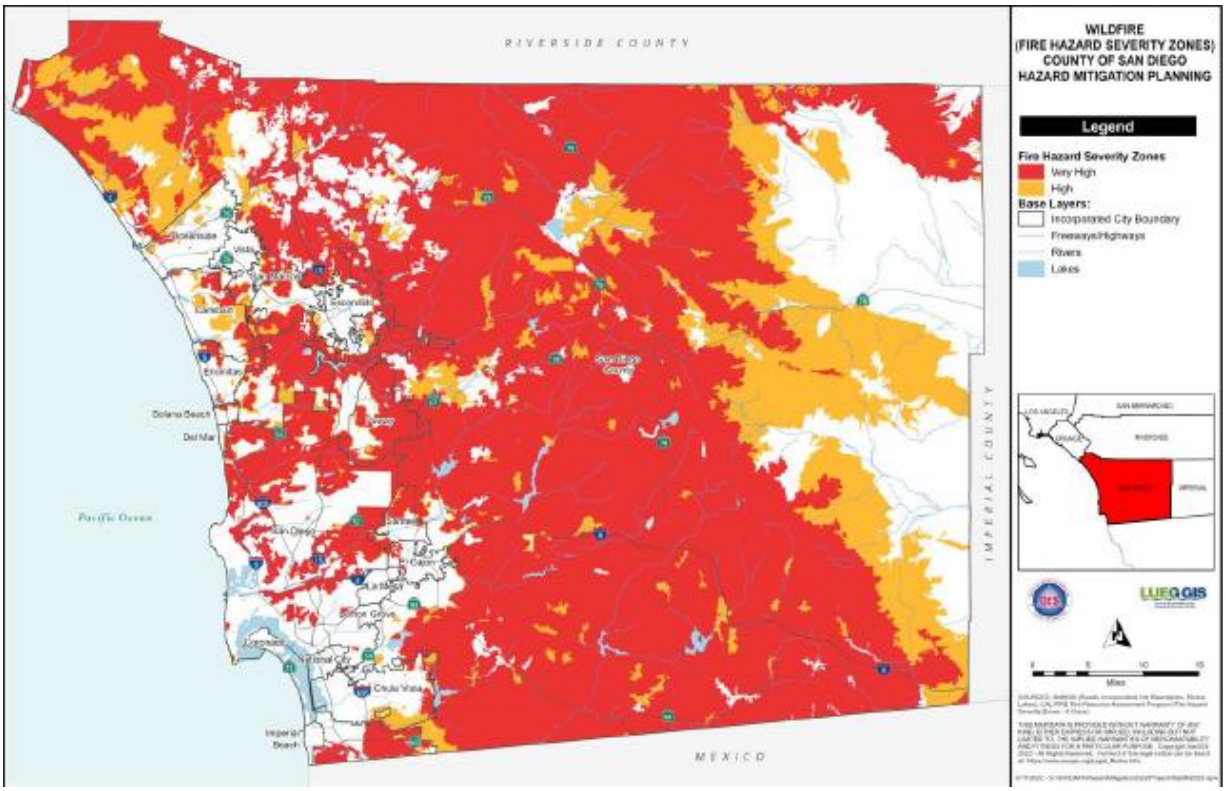
TOP HAZARDS IN CITY OF SAN DIEGO

The following top five hazards were identified by the Local Planning Group (LPG) to have an impact on the City of San Diego:Wildfire/Structure Fire, Flood, Drought, Extreme Heat, and Earthquake were chosen as the top five hazards because of the historical occurrence of the first four since 1998. Earthquake was chosen because of the 1 to 10 percent of occurrence in the next year. The other four medium ranked hazards have not significantly impacted the City of San Diego as much as the ones chosen as the top five, so they were not included.

1. **Wildfire/Structure Fire**
   - **Likely:** *10 to 90 percent probability of occurrence in the next year or a recurrence interval of 1 to 10 years.*
   - **Medium:** The criteria fall mostly in the middle ranges of classifications and the event's impacts on the planning area are noticeable but not devastating. This rating is sometimes used for hazards with a high extent rating but very low probability rating.

   - A structure fire hazard is one where there is a risk of a fire starting in an urban setting and spreading uncontrollably from one building to another across several city blocks, or within high-rise buildings.

- A wildfire is an uncontrolled fire spreading through vegetative fuels and exposing or possibly consuming structures. They often begin unnoticed and spread quickly. Naturally occurring and non-native species of grasses, brush, and trees fuel wildfires.
- A wildfire is in a wildland area in which development is essentially nonexistent—except for roads, railroads, power lines and similar facilities. An Urban-Wildland/Urban Interface fire is a wildfire in a geographical area where structures and other human development meet or intermingle with wildland or vegetative fuels. Significant development in San Diego County is located along canyon ridges at the wildland/urban interface. Areas that have experienced prolonged droughts or are excessively dry are at risk of wildfires.
- San Diego County's topography consists of a semi-arid coastal plain and rolling highlands which, when fueled by shrub overgrowth, occasional Santa Ana winds and high temperatures, creates an ever-present threat of wildland fire. Extreme weather conditions such as high temperature, low humidity, and/or winds of extraordinary force may cause an ordinary fire to expand into one of massive proportions.
- Large fires would have several indirect effects beyond those that a smaller, more localized fire would create. These may include air quality and health issues, road closures, business closures, and others that increase the potential losses that can occur from this hazard. Modeling for a larger type of fire would be difficult, but the consequences of the three largest San Diego fires this century (October, 2003, October 2007 and May 2014) should be used as a guide for fire planning and mitigation.
- The wildfire maps use the CAL Fire Resource Assessment Program data for Fire Hazard Severity Zones.



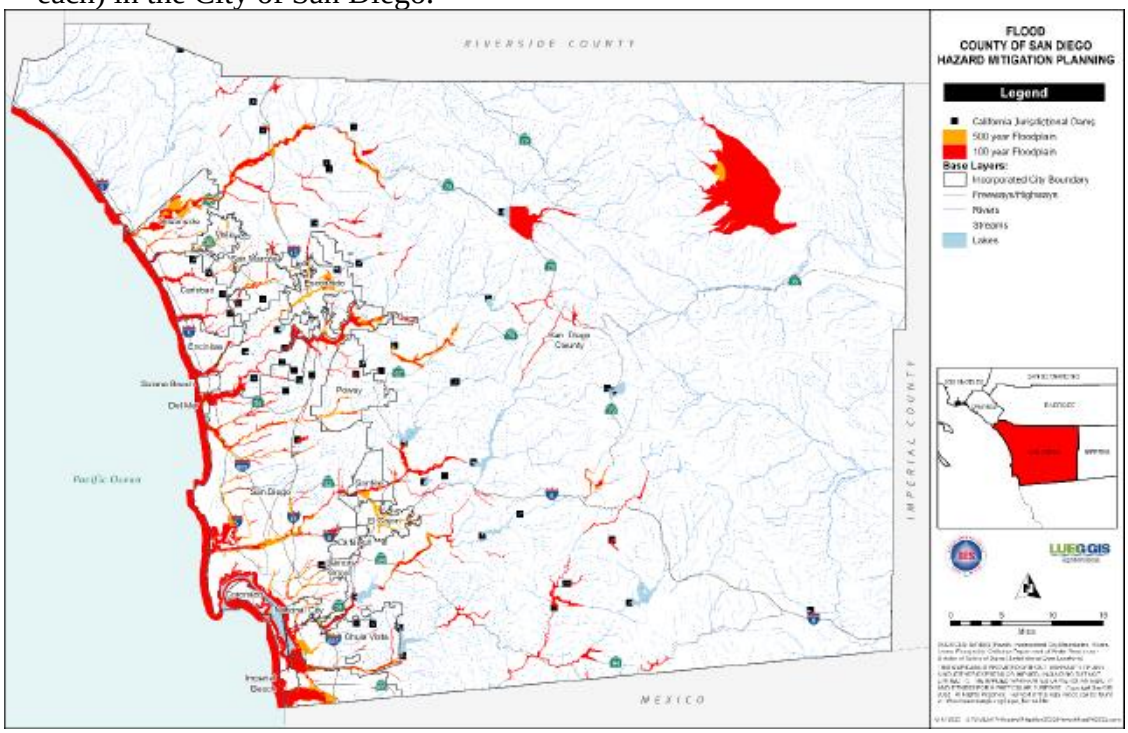
Additional regional mapping can be found in the County of San Diego Multi-Jurisdictional Hazard Mitigation Base Plan.

2. Flood

- **Likely:** *10 to 90 percent probability of occurrence in the next year or a recurrence interval of 1 to 10 years.*
- **Medium:** The criteria fall mostly in the middle ranges of classifications and the event's impacts on the planning area are noticeable but not devastating. This rating is sometimes used for hazards with a high extent rating but very low probability rating.
- A flood occurs when excess water from snowmelt, rainfall, or storm surge accumulates and overflows onto a river's bank or to adjacent floodplains. Floodplains are lowlands adjacent to rivers, lakes, and oceans that are subject to recurring floods. Most injuries and deaths from flood occur when people are swept away by flood currents, and property damage typically occurs because of inundation by sediment-filled water.
- Several factors determine the severity of floods, including rainfall intensity and duration. A large amount of rainfall over a short time span can result in flash flood conditions. A sudden thunderstorm or heavy rain, dam failure, or sudden spills can cause flash flooding. The National Weather Service's definition of a flash flood is a flood occurring in a watershed where the time of travel of the peak of flow from one end of the watershed to the other is less than six hours.
- There are no watersheds in San Diego County that have a longer response time than six hours. In this county, flash floods range from the stereotypical wall of water to a gradually rising stream. The central and eastern portions of San Diego County are most

susceptible to flash floods where mountain canyons, dry creek beds, and high deserts are the prevailing terrain.

- In regions, such as San Diego, without extended periods of below-freezing temperatures, floods usually occur during the season of highest precipitations or during heavy rainfalls after long dry spells. The areas surrounding the river valleys in all of San Diego County are susceptible to flooding because of the wide, flat floodplains surrounding the riverbeds, and the numerous structures that are built in the floodplains.
- One unusual characteristic of San Diego's hydrology is that it has a high level of variability in its runoff. The western watershed of the County of San Diego extends about 80 miles north from the Mexican border and approximately 45 miles east of the Pacific Ocean. From west to east, there are about 10 miles of rolling, broken coastal plain, 10 to 15 miles of foothill ranges with elevations of 600 to 1,700 feet; and approximately 20 miles of mountain country where elevations range from 3,000 to 6,000 feet. This western watershed constitutes about 75% of the County, with the remaining 25% mainly desert country.
- There are over 3,600 miles of rivers and streams which threaten residents and over 200,000 acres of flood-prone property. Seven principal streams originate or traverse through the unincorporated area. From north to south, they are the Santa Margarita, San Luis Rey, San Dieguito, San Diego, Sweetwater, Otay, and Tijuana Rivers (Unified San Diego County Emergency Services Organization Operational Area Emergency Plan, 2006).
- Based on FEMA records, there have been 53 repetitive losses (losses of at least $1,000 each) in the City of San Diego.

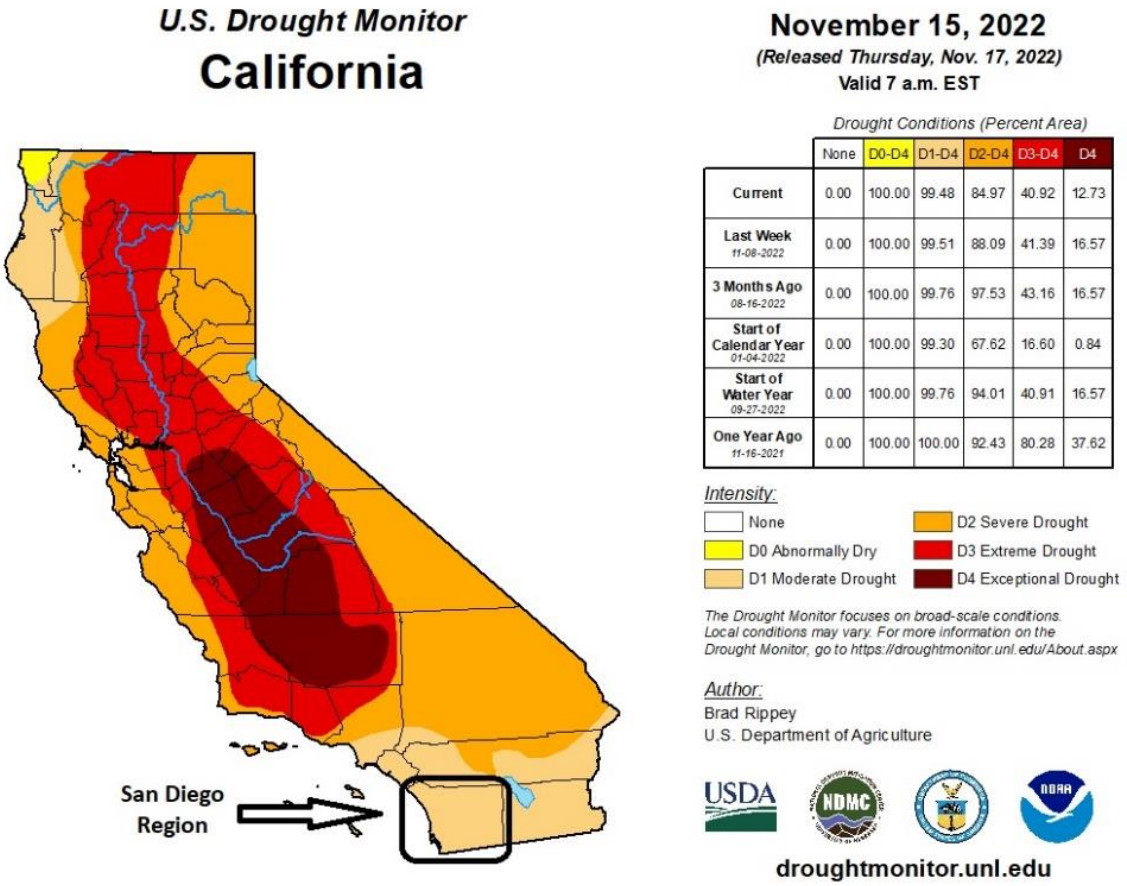


Additional regional mapping can be found in the County of San Diego Multi-Jurisdictional Hazard Mitigation Base Plan.

3. Drought

- **Likely:** *10 to 90 percent probability of occurrence in the next year or a recurrence interval of 1 to 10 years.*
- **Medium:** The criteria fall mostly in the middle ranges of classifications and the event's impacts on the planning area are noticeable but not devastating. This rating is sometimes used for hazards with a high extent rating but very low probability rating.
- A drought is A period of abnormally dry weather sufficiently long enough to cause a serious hydrological imbalance.
- Warming temperatures statewide could result in reduced water supply for the San Diego region. The State Water Project and Colorado River provide 75% to 95% of the water supply for the San Diego region, depending on the year. Both of these water supplies originate in mountain snowpack. Over the past 50 years across most of the Southwest, there has been less late-winter precipitation falling as snow, earlier snowmelt, and earlier arrival of most of the year's streamflow. Projections of further warming will result in reduced snowpack, which could translate into reduced water supply for the San Diego region's cities, agriculture, and ecosystems. In fact, studies indicate that San Diego's sources of water could shrink by 20 percent or more by 2050. An additional threat to water supply is the vulnerability of the levees protecting the California Delta, which feeds the State Water Project. According to the California Adaptation Planning Guide, jurisdictions in the San Diego region must carefully consider the vulnerability of their water supply.
- Although there is a lot of variability, projections indicate that there will be longer and more frequent drought that will be punctuated by extreme precipitation. The evaporative demand (atmospheric thirst) is an important component in driving the extent of future droughts.
- Drought can increase wildfire risk and lead to fine fuel regrowth after a fire. This type of vegetation is more susceptible to fires, creating a feedback.
- Extreme drought has the potential to intensify and change community composition and structure of ecosystems. Drought has severe consequences because it operates at spatial scales larger than other disturbances such as fire.
- The highest priority mitigation actions to reduce Climate Change impacts on this hazard should include water supply reliability that originates from a diversity of water supplies and conservation planning that addresses the impacts of drought on ecosystems.

U.S. Drought Monitor, using the [Palmer Drought Severity Index](#).

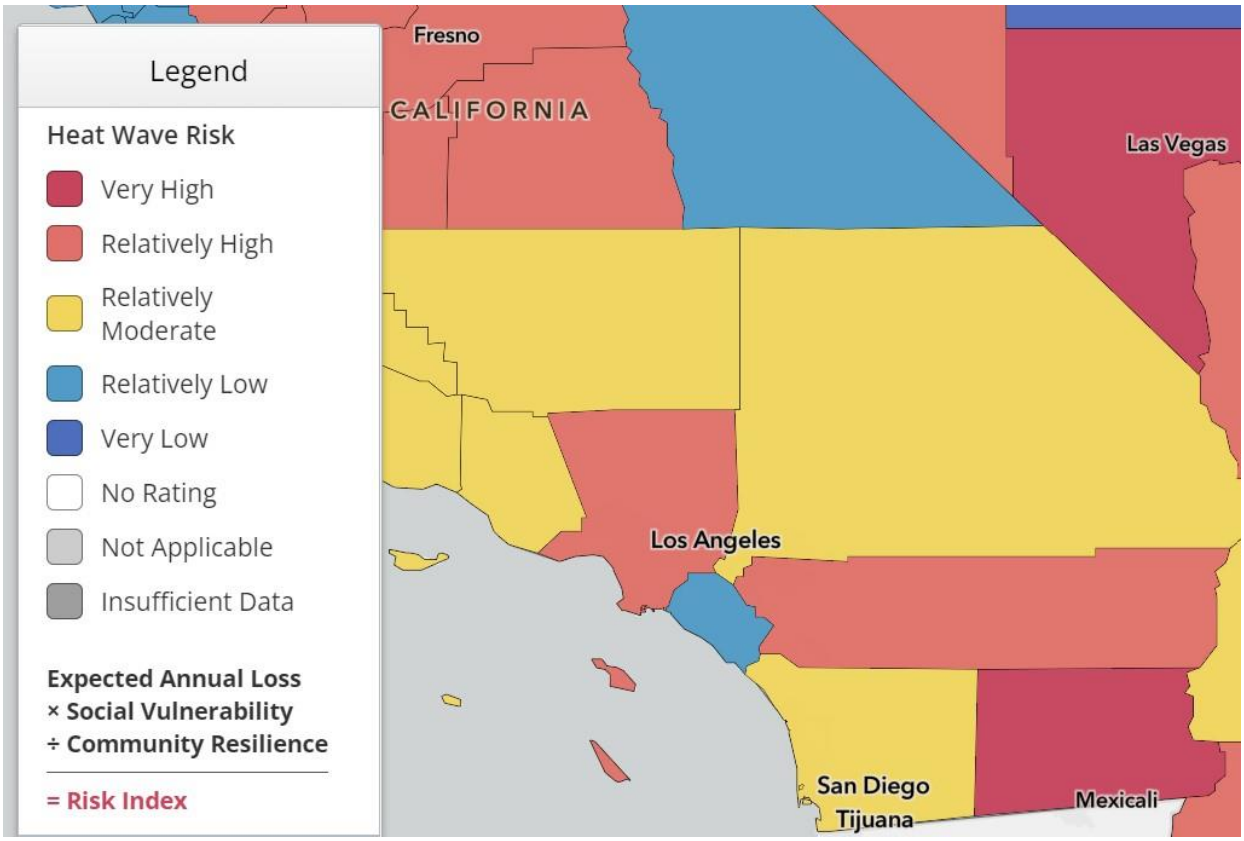


Additional regional mapping can be found in the County of San Diego Multi-Jurisdictional Hazard Mitigation Base Plan.

4. Extreme Heat

- **Likely:** *10 to 90 percent probability of occurrence in the next year or a recurrence interval of 1 to 10 years.*
- **Medium:** The criteria fall mostly in the middle ranges of classifications and the event's impacts on the planning area are noticeable but not devastating. This rating is sometimes used for hazards with a high extent rating but very low probability rating.
- Although extreme heat does not cause structural damage like floods, fires, and earthquakes, heat waves claim many lives due to heat exhaustion and heat stroke. According to a California Energy Commission Study, from 1994 to 2009, heat waves have claimed more lives in California than all declared disaster events combined.
- Extreme heat is exacerbated by the "urban heat island effect", whereby impervious surfaces, such as concrete and asphalt, absorb heat and result in greater warming in urban areas compared to rural areas. Urban heat islands exacerbate the public health impacts that heat waves have upon the more vulnerable populations.
- San Diego County has among the highest percentages of impervious surfaces in the United States.

- Extreme heat events put vulnerable populations (older adults, children, the chronically ill, and people who work outside) at risk of heat-related illnesses and death. Extreme heat events highlight the importance of thoughtful social vulnerability analysis to identify populations most at risk.
- Power outages and poor air quality are further effects of extreme heat events with increased use of air conditioning and the potential increase in ozone formation, a component of smog.
- San Diego is facing an increase in the frequency, duration, and strength of heat waves with many residents less likely to have air conditioning living near the coast this leaves residence in San Diego in greater risk during temperature spikes.
- Research indicates regional heat waves will likely become more humid with higher nighttime temperatures, further stressing public health. Extreme warm temperatures in the San Diego region historically occur in July and August, as climate change takes hold, our region is seeing higher temperatures run earlier and later each year.
  FEMA risk index for extreme heat: https://hazards.fema.gov/nri/map

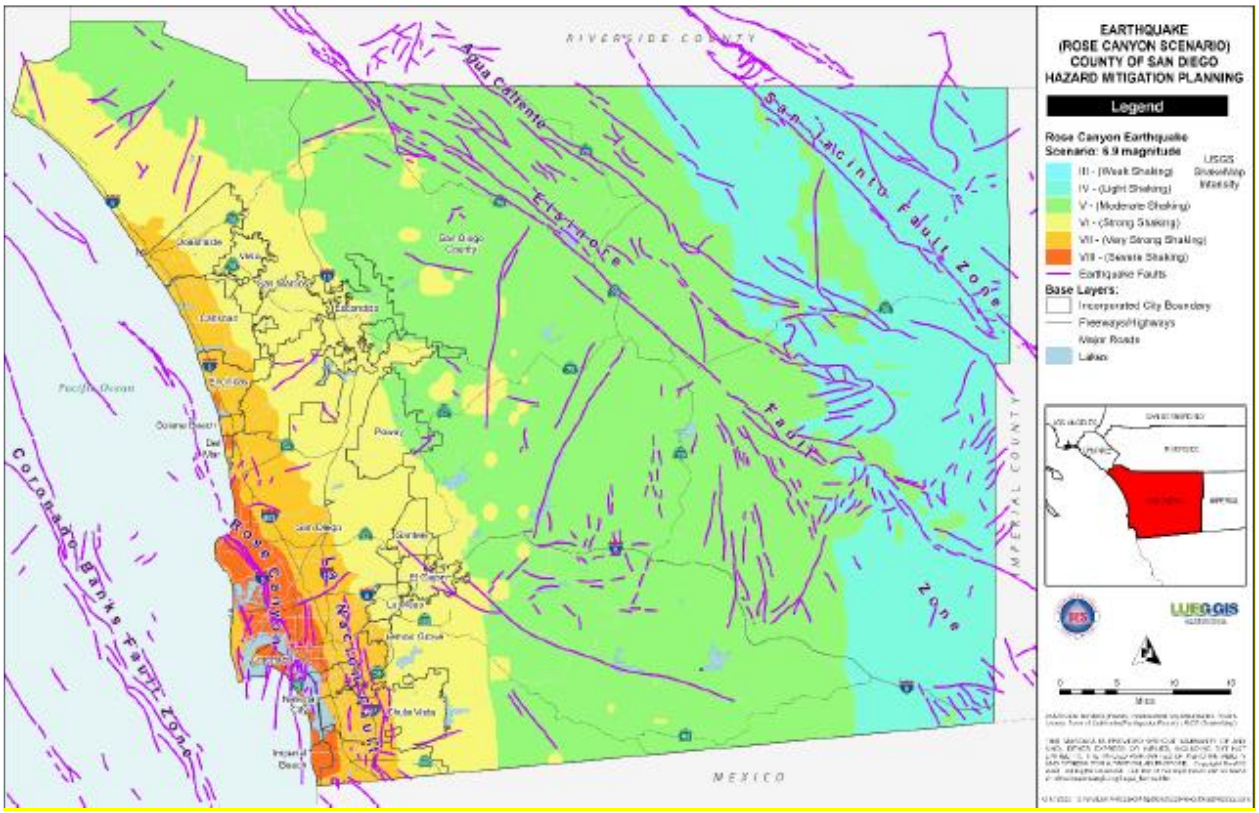


Additional regional mapping can be found in the County of San Diego Multi-Jurisdictional Hazard Mitigation Base Plan.

5. Earthquakes

- **Occasional:** *1 to 10 percent probability of occurrence in the next year or a recurrence interval of 11 to 100 years.*
- **Medium:** The criteria fall mostly in the middle ranges of classifications and the event's impacts on the planning area are noticeable but not devastating. This rating is sometimes used for hazards with a high extent rating but very low probability rating.
- An earthquake is a sudden motion or trembling that is caused by a release of strain accumulated within or along the edge of the Earth's tectonic plates. The effects of an earthquake can be felt far beyond the site of its occurrence. They usually occur without warning and, after just a few seconds, can cause massive damage and extensive casualties. Common effects of earthquakes are ground motion and shaking, surface fault ruptures, and ground failure. Ground motion is the vibration or shaking of the ground during an earthquake.
- When a fault ruptures, seismic waves radiate, causing the ground to vibrate. The severity of the vibration increases with the amount of energy released and decreases with distance from the causative fault or epicenter. Soft soils can further amplify ground motions. The severity of these effects is dependent on the amount of energy released from the fault or epicenter. One way to express an earthquake's severity is to compare its acceleration to the normal acceleration due to gravity. The acceleration due to gravity is often called "g". A 100% g earthquake is very severe.
- The effects of an earthquake can be felt far beyond the site of its occurrence. They usually occur without warning and, after just a few seconds, can cause massive damage and extensive casualties. Common effects of earthquakes are ground motion and shaking, surface fault ruptures, and ground failure. Ground motion is the vibration or shaking of the ground during an earthquake.
- Several major active faults exist in San Diego County, including the Rose Canyon, La Nacion, Elsinore, San Jacinto, Coronado Bank and San Clemente Fault Zones. The Rose Canyon Fault Zone is part of the Newport-Inglewood fault zone, which originates to the north in Los Angeles, and the Vallecitos and San Miguel Fault Systems to the south in Baja California. The Rose Canyon Fault extends inland from La Jolla Cove, south through Rose Canyon, along the east side of Mission Bay, and out into San Diego Bay.
- The Rose Canyon Fault is considered the greatest potential threat to San Diego as a region, due to its proximity to areas of high population. The La Nacion Fault Zone is located near National City and Chula Vista. The Elsinore Fault Zone is a branch of the San Andreas Fault System. It originates near downtown Los Angeles and enters San Diego County through the communities of Rainbow and Pala; it then travels in a southeasterly direction through Lake Henshaw, Santa Ysabel, Julian; then down into Anza-Borrego Desert State Park at Agua Caliente Springs, ending at Ocotillo, approximately 40 miles east of downtown.

- The San Jacinto Fault is also a branch of the San Andreas Fault System. This fault branches off from the major fault as it passes through the San Bernardino Mountains. Traveling southeasterly, the fault passes through Clark Valley, Borrego Springs, Ocotillo Wells, and then east toward El Centro in Imperial County. This fault is the most active large fault within County of San Diego. The Coronado Bank fault is located about 10 miles offshore. The San Clemente Fault lies about 40 miles off La Jolla and is the largest offshore fault at 110 miles or more in length (Unified San Diego County Emergency Services Organization Operational Area Emergency Plan, 2014).



Additional regional mapping can be found in the County of San Diego Multi-Jurisdictional Hazard Mitigation Base Plan.

CAPABILITIES ASSESSMENT

The LPG identified current capabilities available for implementing hazard mitigation activities. This Capability Assessment (Assessment) portion of the jurisdictional mitigation plan identifies administrative, technical, legal, and fiscal capabilities. **This includes a summary of departments and their responsibilities associated to hazard mitigation planning as well as planning area development, codes, ordinances, and plans already in place to reduce hazard vulnerabilities.** The departments described below consist of, and support, over 11,000 City personnel serving the populous of the eighth largest City in the United States and the second largest City in California. The second part of this Assessment provides San Diego's fiscal

capabilities that may be applicable to providing financial resources to implement identified mitigation action items.

EXISTING INSTITUTIONS, PLANS, POLICIES AND ORDINANCES

The following is a summary of existing departments in San Diego and their responsibilities related to hazard mitigation planning area development, planning and implementation, as well as existing planning documents and regulations related to hazard mitigation development and efforts within the community. The administrative and technical capabilities of the City of San Diego provide an identification of the staff, personnel, and department resources available to implement the actions identified in the mitigation section of the Plan. Specific resources reviewed include those involving technical personnel such as planners/engineers with knowledge of land development and land management practices, engineers trained in construction practices related to building and infrastructure, planners and engineers with an understanding of natural or manmade hazards, floodplain managers, surveyors, and personnel with GIS skills.

DEVELOPMENT SERVICES DEPARTMENT

The Development Services Department manages the City of San Diego's land development process from concept to completion. The scope of responsibility for construction and development projects includes permit issuance; review of subdivision maps and public improvement and grading plans; compliance with land use regulations, community plans and environmental status; review of construction plans; and construction projects.

Land Development Code/Environmentally Sensitive Land Regulations and Coastal Development Regulations: These sections of the Land Development Code restrict development in areas prone to hazards, such as floodplains, steep slopes, and unstable soils or geologic formations and would require permits and compliance with specific requirements for any disturbance of defined environmentally sensitive lands (habitat, wetlands, steep hillsides, coastal bluffs, etc.) or for any work done to repair or restore an area damaged by those hazards included in this plan. However, provisions are provided to allow emergency work without delay.

ECONOMIC DEVELOPMENT DEPARTMENT

The May 2014 revision to the FY 2015 budget contains the re-establishment of the Economic Development Department which will separate the function from the current Planning, Neighborhoods, and Economic Development Department. This action reflects the Mayor's commitment to foster economic development throughout the City. This proposal creates a single department to coordinate economic development opportunities with local, national, and international stakeholders. This new department will assure new and existing businesses the City of San Diego is open for business and truly values business' contributions in creating a successful and diversified economy.

ENVIRONMENTAL SERVICES DEPARTMENT

The Environmental Services Department (ESD) was established to protect the environment, ensure the proper disposal of municipal solid waste and mitigation of litter and illegal dumping.

ESD's mission also includes waste reduction/recycling, composting, landfill management to meet the City of San Diego's long-term waste disposal needs. In addition, ESD oversees the City's management of energy, pursues innovative energy independence goals and works to advance more sustainable practices within the City organization and the community.

The Department is organized into three operational divisions:

Collections Services Division provides weekly refuse and every-other-week recyclables and yard waste collection services to 290,000 homes and places, and services street litter bins in commercial districts throughout the City.
Energy Sustainability and Environmental Protection Division develops and manages programs relating to energy use, sustainability, climate change, and the proper management of hazardous waste. This division includes energy, sustainability, and environmental protection programs.

Waste Reduction and Disposal Division develops and implements the City's solid waste reduction and diversion programs and policies, conducts disposal and composting operations at the City's Miramar Landfill, manages the City's inactive landfill sites, provides illegal dump and community cleanup services throughout the City, and enforces the City's solid waste codes.

FIRE-RESCUE DEPARTMENT

The Fire-Rescue Department is a multi-faceted organization that provides City residents with fire and life safety services including fire protection, emergency medical services, and lifeguard protection at San Diego beaches.

They protect lives, property, and environment through fire suppression, emergency medical care and transport, technical rescue, hazardous materials response and mitigation, fire investigation, explosive device mitigation, fire safety inspections/code enforcement, fire prevention and education programs, disaster preparedness, waterway and swift-water rescue, swimmer safety, and operation of the 911 communications/dispatch center.

OFFICE OF EMERGENCY SERVICES

The San Diego Office of Emergency Services (OES) oversees the City's Preparedness Grant, Emergency Preparedness, Emergency Operations Center, and Public and Disaster Assistance programs. The collective purpose of these four programs and mission is to promote a secure and resilient city with the capabilities required across the whole community to prevent, protect against, mitigate, respond to, and recover from threats and hazards that pose the greatest risk. Those risks include the full spectrum of natural and man-made disasters or events most likely to jeopardize the health and safety of our populous and the critical infrastructure it depends upon.

The Preparedness Grant Program involves securing and managing Federal Homeland Security grant funds for the San Diego region through the FEMA Urban Area Security Initiative. The UASI grants are intended to address the needs of high-threat, high-density urban areas, and assist them in building an enhanced and sustainable capacity to prevent, protect against, mitigate, respond to, and recover from acts of terrorism. The UASI grants focus on enhancing preparedness through regional collaboration and the development of integrated regional capabilities.

Through the State Homeland Security Program and Emergency Management Performance Grants the City is awarded or allocated resources dedicated to improving our emergency preparedness capabilities.

The Emergency Preparedness Program enhances and supports the City's preparedness for major emergencies and disasters. This program leads the development, review and internal/external integration for all City emergency plans. Provides coordination and collaboration with County, State, and federal jurisdictions/agencies, manages/supports the City's readiness and utilization of the Regional Community Emergency Notification System (i.e, Alert San Diego), facilitates the provision of information to the public and the business community to assist in emergency preparations/response, and coordinates/oversees relevant citywide emergency training and exercises.

During major emergencies and disasters, the City's Emergency Operations Center (EOC) may be activated to support and coordinate the City's overall multi-departmental emergency response and recovery operations. The EOC Program maintains operational readiness of the City's primary EOC and alternate EOC. This program develops and updates EOC protocols and processes, manages the assignment, training, and readiness of EOC staff members, maintains and enhances EOC facilities, equipment, and information management systems. This includes developing, updating protocols and resources in support of the OES Duty Officer who is a 24/7 emergency point of contact and resource for City officials and regional partners.

Through the Public and Disaster Assistance Program, we manage and coordinates the City's participation in State and federal recovery-related financial assistance programs such as the FEMA Public Assistance Grant Program and the California Disaster Assistance Act Program to facilitate the City's recovery from major emergencies and disasters.

INFORMATION TECHNOLOGY DEPARTMENT

The department is responsible for providing the City of San Diego's Information Technology strategic direction, policies, procedures, and standards. The goals of the department are to effectively manage the delivery of City-wide technology services, guide technology decision-making to ensure consistency with the City-wide business direction, ensure a skilled, responsive, and innovative workforce that keeps current with evolving business-critical technologies, and provide a high quality of customer service. This department provides communication and technology solutions to all City departments and operational locations to ensure the effective utilization of technology is resourced, procured, implemented and maintained to meet all mission critical requirements for the City; including emergency and disaster response efforts.

PARK AND RECREATION DEPARTMENT

The mission of the Park and Recreation Department is to acquire, develop, and maintain open park and recreation areas/programs for the City. The department is responsible for overseeing nearly 41,000 acres of developed and undeveloped space, more than 340 parks including Balboa Park, Mission Trails Regional Park, and Mission Bay Park. This includes 26 miles of shoreline from Sunset Cliffs to La Jolla, 13 pools, 3 public golf complexes, and 56 recreation centers. Park and recreation department is also tasked with emergency shelter operations for the City, maintaining the readiness and training to provide emergency shelter in 17 locations throughout the City with combined capacity to support 7754 emergent evacuee's or 4092 persons for temporary sheltering.

PLANNING DEPARTMENT

The Planning department is responsible for the development and implementation of land use and transportation policies, as well as long-range fiscal planning for public facilities. San Diego's General Plan, adopted in 2008, provides the 20–30-year blueprint for how the City will be developed. Planning staff also work with other agencies, including the San Diego Association of Governments (SANDAG), to help ensure the City and regional plans together represent a unified version and implementation strategy. As a participating jurisdiction in the County's Multi-Jurisdictional Hazard Mitigation Plan, the City, through its General Plan, has adopted policies that guide development away from hazardous sites while utilizing hazardous mitigation and other safety measures in the provision of future developments. The policies addressing hazardous mitigation are concentrated in the Land Use, Mobility, Urban Design, and Public Facilities, Services and Safety Elements.

On July 7, 2009, the City Council adopted the General Plan Action Plan, the implementation and monitoring document accompanying the General Plan. Both the General Plan and Action Plan contain policies that limit future development in hazardous areas. Because the General Plan does not address specific community zoning issues, these mitigation measures are achieved through the Community Plan Update process.

The City's community plans are integral components of the General Plan, refining the broad City–wide policies to more community–specific policies which remain consistent with the General Plan. The Department's primary responsibilities related to hazardous mitigation are implemented through the update of Community Plans.

POLICE DEPARTMENT

The San Diego Police Department provides law enforcement, scene and event security, evacuations, public emergency notifications, traffic and crowd control, traffic and criminal investigations, records management, permits and licensing for police regulated businesses, laboratory services, and support services. The City is represented by nine area commands, divided into 19 service areas, policing 122 neighborhoods. The Department plans for and implements the Dam Failure Plan and the San Diego River Road Closure Plan. The Police Department coordinates with local and regional law enforcement agencies with shared intelligence fusion centers which assist in potential threat identification, mitigation, and disaster planning for the City of San Diego.

PUBLIC UTILITIES DEPARTMENT

The Public Utilities Department is comprised of the Wastewater and Water Sections. The emphasis for this department is to provide a streamlined, effective organization in oversight, strategic planning, and administration for the City's water storage, treatment, and delivery systems, the regional wastewater treatment and disposal services, and the Municipal Sewage System.

Metropolitan Wastewater's mission is to provide the public with a safe and efficient regional sewer system, supplements our limited water supply, and ensures all federal standards are met. Through state-of-the-art facilities, water reclamation, biosolids production and cogeneration, the City is a leader in maximizing the conservation of water and energy as part of the wastewater treatment process.

San Diego operates more than 3,302 miles of water lines, 49 water pump plants, 90+ pressure zones, and more than 200 million gallons of potable water storage capacity in 32 standpipes, elevated tanks, and concrete and steel reservoirs. In addition to supplying more than 280,000 metered service connections within its own incorporated boundaries, San Diego conveys and sells potable water to the City of Del Mar, the Santa Fe and San Dieguito Irrigation Districts, and the California American Water Company, which, in turn, serves the Cities of Coronado and Imperial Beach and portions of south San Diego. San Diego also maintains several emergency connections to and from neighboring water agencies, including Santa Fe Irrigation District, the Poway Municipal Water District, and Otay Water District, the California American Water Company, and the Sweetwater Authority.

PUBLIC WORKS DEPARTMENT

Engineering Branch

The department is responsible for planning, design, project management, and construction management of public improvement projects, quality control and inspection of private work permitted in the right-of –way, surveying and material testing, and providing traffic operations and transportation engineering services.

Engineering activities include work on various public infrastructure assets to rehabilitate, restore, improve, and add to the City of San Diego's capital facilities. The Capital Improvement Program (CIP) covers a wide range of projects including: airports, bikeways, drainage and flood control facilities, libraries, parks and recreation centers, police, fire and lifeguard stations, street improvements, street lights, traffic signals, utilities undergrounding, water and sewer facilities and pipelines.

Traffic engineering services include transportation system forecasting and program management, responding to traffic requests from the public, maintaining the City's traffic signal system, and traffic safety analysis.

General Services Branch

This branch of Public Works is composed of five distinct elements providing a range of services to the City of San Diego.

Communications provides primary service delivery for wireless communications technologies; engineers, installs, operates, and maintains private, metropolitan-wide, wireless voice and data communications systems and equipment; and contracts for commercially-provided wireless services. They ensure the provision of life-line voice and data communications for emergency first responders.

Facilities is responsible for ensuring the facilities where library, park and recreation centers, and other government services are provided and maintained in a safe and operable manner. More than 1,600 City facilities are in constant use and require preventive maintenance, custodial service, scheduled maintenance, and, in some cases, emergency repair to keep them in full operation. The Facilities staff, which includes plumbers, painters, electricians, carpenters, locksmiths, and other skilled-trades people, provides these services to City departments.

Fleet Services provides all City departments with motive equipment and a full range of fleet management services. These services include acquisition, fitting, maintenance and repair, the provision of parts and fuel, body repair, painting, metal fabrication, disposal services, and other motive equipment-related support services, such as machining, equipment rental, and operator training.

Publishing Services provides full reproduction capability, including offset press operations, high-volume copying and finishing services, to include graphic design and electronic publishing services.

TRANSPORTATION & STORM WATER DEPARTMENT

The Transportation & Storm Water Department is responsible for the operation and maintenance of streets and storm drains, leads efforts to protect and improve the water quality of rivers, creeks, bays, and the ocean, performs traffic and transportation system engineering, manages the Utilities Undergrounding Program, and coordinates work in the public right-of-way. The department is comprised of four divisions:

The ROW Coordination Division provides centralized policies and ensures improvements are reviewed, permitted, and inspected for quality assurance and conformity to policies, procedures, and standards. The Division is responsible for coordination of activities within the public ROW among City departments, public and private utilities, developers, and other entities planning and performing work within the public ROW. In addition, the ROW Coordination Division manages the planning and implementation of the City's Utilities Undergrounding Program. The Utilities Undergrounding Program removes overhead utility lines (electric, phone, cable, etc.,) and relocates them underground in accordance with the City's Utilities Undergrounding Master Plan.

The Storm Water Division leads the City's efforts to protect and improve the water quality of rivers, creeks, bays, and the ocean. The Division's efforts are conducted to ensure compliance with the Municipal Storm Water Permit and other surface water quality regulations issued by the State of California. The Division's priorities are to identify and abate sources of pollution through the implementation of innovative and efficient public education, watershed management, storm water development and construction regulations, enforcement, City-wide training programs, and to provide the most efficient storm drain system operation and maintenance services to residents. The City has over 48,000 storm drain structures, 700 miles of drainage pipe, 15 storm water pump stations, and 26 Best Management Practices (BMPs). The Division is responsible for the inspection, maintenance, repair of storm drain systems in the public ROW and drainage easements, and ensuring this work is conducted in compliance with all local, State, and Federal environmental regulations. The Division manages maintenance efforts for 84 miles of drainage channels and ditches located throughout the City. The Division is also responsible for street sweeping program which removes debris that collects in gutters and can potentially clog drains. The City currently has over 2,700 miles of improved streets that are included in the sweeping program.

The Street Division maintains and repairs all streets, alleys, sidewalks, bridges, guardrails, streetlights, traffic signals, pavement markings, and trees in the right-of-way. The Division also manages the City's Resurfacing Program and administers annual resurfacing and slurry seal contracts.

The Transportation Engineering and Operations Division manages the City's transportation network to include coordination of traffic investigations for signs, markings, traffic control devices, speeding concerns, and parking issues; crash data collection and analysis; traffic volume data collection; establishment of speed zones; traffic signal management (signal timing, installation, and modification); conducting mobility studies; and investigating and responding to the need for street lights, pedestrian safety improvements, traffic calming, and school safety improvements.

Overall, these departments work continue to work in tandem since the last plan update to decrease the probability of the planning area's hazard vulnerability in regards to development, planning, and implementation of projects such as the Goals, Objectives, and Actions listed in this plan.

6. SECTION SIX: Develop a Mitigation Strategy

The mitigation strategy serves as the long-term blueprint for reducing potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process.

The mitigation strategy is made up of three main required components: mitigation goals, mitigation actions, and an action plan for implementation. These provide the framework to identify, prioritize, and implement actions to reduce risk to hazards.

Mitigation goals are general guidelines that explain what the community wants to achieve with the plan.

These are usually broad policy-type statements that are long-term, and they represent visions for reducing or avoiding losses from the identified hazards

Mitigation actions are specific projects and activities that help achieve the goals.

The action plan describes how the mitigation actions will be implemented, including how those actions will be prioritized, administered, and incorporated into the community's existing planning mechanisms. In a multi-jurisdictional plan, each jurisdiction must have an action plan specific to that jurisdiction and its vulnerabilities.

Although not required, some communities choose to develop **objectives** to help define or organize mitigation actions. Objectives are broader than specific actions, but are measurable, unlike goals. Objectives connect goals with the actual mitigation actions.

6.1. Mitigation Action Evaluation

Use this worksheet to help evaluate and prioritize each mitigation action being considered by the planning team. For each action, evaluate the potential benefits and/or likelihood of successful implementation for the criteria defined below.
Rank each of the criteria with a -1, 0 or 1 using the following scale:

- 1 = Highly effective or feasible
- 0 = Neutral
- -1 = Ineffective or not feasible

Example Evaluation Criteria:

- **Life Safety** – How effective will the action be at protecting lives and preventing injuries?
- **Property Protection** – How significant will the action be at eliminating or reducing damage to structures and infrastructure?
- **Technical** – Is the mitigation action technically feasible? Is it a long-term solution? Eliminate actions that, from a technical standpoint, will not meet the goals.
- **Political** – Is there overall public support for the mitigation action? Is there the political will to support it?
- **Legal** – Does the community have the authority to implement the action?
- **Environmental** – What are the potential environmental impacts of the action? Will it comply with environmental regulations?
- **Social** – Will the proposed action adversely affect one segment of the population? Will the action disrupt established neighborhoods, break up voting districts, or cause the relocation of lower income people?
- **Administrative** – Does the community have the personnel and administrative capabilities to implement the action and maintain it or will outside help be necessary?
- **Local Champion** – Is there a strong advocate for the action or project among local departments and agencies that will support the action's implementation?
- **Other Community Objectives** – Does the action advance other community objectives, such as capital improvements, economic development, environmental quality, or open space preservation? Does it support the policies of the comprehensive plan?

TABLE 13: FEMA LOCAL MITIGATION PLANNING HANDBOOK WORKSHEET 6.1 DATA.

In the following Section 6.2, the plan will outline our general goals and actions, our prioritization of those goals, and how we plan to deliver on the actions outlined. This identification and prioritization process were facilitated through the City of San Diego's local planning group (LPG). The team relies on input from stakeholders to ensure that the goals and actions align with the whole community approach and the feasible facilitation of all stakeholders involved.

6.2. Mitigation Action Implementation

A mitigation action is a specific action, project, activity, or process taken to reduce or eliminate long-term risk to people and property from hazards and their impacts. Implementing mitigation actions helps achieve the plan's mission and goals. The actions to reduce vulnerability to threats and hazards form the core of the plan and are a key outcome of the planning process. For more information on potential funding sources and grants, please see the County of San Diego Multi-jurisdictional Hazard Mitigation Base Plan, Section 6.2. This annex details the following mitigation action implementations:

Goal 1: Promote public understanding, support and demand for hazard mitigation.	
Objective 1.A: Promote partnerships between the state, counties, local and tribal governments to identify, prioritize, and implement mitigation actions.	
Action 1.A.1	Develop a comprehensive approach to educating the public of the importance of "defensible space" for protection of their homes and property.

Goal 2: Improve hazard mitigation coordination and communication with federal, state, local, and tribal governments.	
Objective 2.A: Establish and maintain closer working relationships with state agencies, local, and tribal governments.	
Action 2.A.1	Strengthen City and region-wide threat and hazard identification through the use of a Risk Management Program that enables regional stakeholders to utilize and assess quantitative and qualitative data, e.g. Critical Infrastructure/Key Resources (CIKR) databases, relative risk rankings of CIKR sites, core capability assessments, etc.

Goal 3: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and State-owned facilities, due to <u>wildfire/structure fire, coastal storms/erosion/tsunami, landslide, hazardous materials, and other manmade hazards</u>.	
Objective 3.A: Develop a comprehensive approach to reducing the possibility of damage and losses due to <u>wildfire/structural fire, coastal storms/erosion/tsunami, landslide, hazardous materials, and manmade hazards</u>.	
Action 3.A.1	Perform brush management activities within the open space, public owned brush management zone, on a bi-annual basis.
Action 3.A.2	Maintain brush management inspection cycle of 42,505 parcels that are divided into 19 inspection areas and accomplished every 3.8 years.
Action 3.A.3	Create buffer zones around residential and non-residential structures through the removal or reduction of flammable vegetation, including vertical clearance of tree branches and removal of dead or dry leaves, needles, twigs, and combustibles from roofs, decks, eaves, porches, and yards.
Action 3.A.4	Create buffer zones around power lines, oil and gas lines, and other infrastructure systems, including replacing flammable vegetation with less flammable.
Action 3.A.5	Maintain critical water and wastewater services to the region through effective critical infrastructure management, to include the use of multi-source power distribution systems, installation and maintenance of permanent alternate power

Goal 3: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and State-owned facilities, due to <u>wildfire/structure fire, coastal storms/erosion/tsunami, landslide, hazardous materials, and other manmade hazards</u>.	
	generators at all plants and pumping stations, and the further development of redundancies in the data transmission of control systems.

Goal 4: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and State-owned facilities, due to <u>severe weather</u> (e.g., El Nino storms/, thunderstorms, lightning, tsunami, and extreme heat and drought).	
Objective 4.A: Develop a comprehensive approach to reducing the possibility of damage and losses due to severe weather.	
Action 4.A.1	Enhance existing City partnerships with appropriate local agencies, community support groups, and service providers to better mitigate hazards that may increasingly result from severe weather and/or climate change.
Action 4.A.2	Support water conservation policies and programs to enforce water use restrictions. These include municipal code enforcement and other restrictions on outdoor water use and indoor practices to mitigate the effects of severe weather and drought.

Goal 5: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and State-owned facilities, due to <u>earthquake and dam failure</u>.	
Objective 5.A: Develop a comprehensive approach to reducing the possibility of damage and losses due to earthquake and dam failure.	
Action 5.A.1	Take actions to safeguard against dam failure, to include supporting public awareness initiatives, initiating structural studies and improvements in coordination with the State's Division of Safety of Dams, and maintaining effective disaster planning in collaboration with local, state, and Federal agencies.

Goal 6: Reduce the high probability of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and State-owned facilities, due to <u>floods</u>.	
Objective 6.A: Develop a comprehensive approach to reducing the high probability of damage and losses due to floods.	
Action 6.A.1	Work with U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), and other Federal, State, and local agencies to restore the conveyance capacity of the following channels by removing deposited sediment, trash and accumulated vegetation to restore original channel cross sections: Cowles

	Mountain/San Carlos, Alvarado (Section 59 and 60 and 61-63), Industrial Court, Smythe, Auburn, Jamacha, Rancho Bernardo, South Chollas, Solola/Cottonwood, Sweetwater, and Tijuana River Valley.
Action 6.A.2	Participate in the National Flood Insurance Program (NFIP) and meet the requirements for conformance with NFIP standards.

Prioritization and Implementation of Action Items

Another important implementation mechanism that is highly effective and low-cost is the incorporation of the hazard mitigation plan (HMP) recommendations and their underlying principles into other jurisdictional plans and mechanisms. Mitigation is most successful when it is incorporated into the day-to-day functions and priorities of government and development. Properly implemented, the HMP should serve as one of the foundational documents of the jurisdictions' emergency management programs, since everything emergency management relates back to most hazards in the jurisdiction.

Implementation through existing plans and/or programs is recommended wherever possible. Based on this Plan's capability assessment and progress made on mitigation actions. The participating jurisdictions continue to implement policies and programs to reduce losses to life and property from natural and human-caused hazards. The Planning Team will be responsible for integrating the data, goals and objectives, and other elements of this Plan into other plans, as appropriate.

The following sections provides some guidance on how the City may use the updated HMP to inform and improve other plans, procedures, and programs.

Comprehensive Plans
Integrating hazard mitigation into the jurisdiction's comprehensive or general plan is considered a best practice by both FEMA and the American Planning Association.

Threat and Hazard Identification and Risk Assessment (THIRA)
The City of San Diego Threat and Hazard Identification and Risk Assessment performed on a 3-year cycle in accordance with best practices outlined by FEMA in the Comprehensive Preparedness guide (CPG 201). The outputs of the 3-step THIRA provide identification and context for local/regional threats and hazards to facilitate and identify capability gaps which in turn inform the HMP. The THIRA spans across three categories; natural hazards, technological hazards and human-caused incidents. In turn, the THIRA output provides the bases of the Stakeholder Preparedness Review (SPR) which further assess current capability to meet and mitigate local/regional threats and hazards identified by the THIRA. This process is key to identifying capability gaps, strategies to address those gaps, and the impact funding may have on our ability to mitigate identified threats and hazards.

Response Plans
All participating jurisdictions have local emergency operations plans (EOP). While the EOP is an all hazards document, it also contains hazard-specific information and concerns. Hazard information from this HMP update will be incorporated into the next EOP update. At a

minimum, all hazards of high significance identified in this Plan should be addressed in future EOP updates.

Several other operational or functional response plans are also influenced by information contained in the HMP. These plans include but are not limited to:

- **Damage Assessment Plan:** A review of the vulnerability and estimated losses detailed in the hazard profiles can help identify what areas to initially prioritize following a hazard event.
- **Debris Management Plan:** HAZUS runs conducted for earthquake scenarios include an estimate of how many tons of debris would likely be generated by those scenarios. These estimates can be used as bounding limits for how much and what type of debris generation is likely to be required, as well as what areas are most likely to see heavy debris generations.
- **Evacuation & Sheltering Plan:** A review of the vulnerability and estimated losses detailed in the hazard profiles can help identify what areas are more likely to need evacuation in different hazard scenarios. This review can also help evaluate the impacts of multiple or cascading hazards, so that evacuees are not relocated into an area that puts them at risk from other hazards.

Recovery Plan

The risk and vulnerability data in the HMP should help inform the post-disaster recovery planning process, especially by ensuring that the recovery elements of those plans fully take into account the dangers posed by other hazards, rather than focusing exclusively on the most recent hazard event. The HMP in turn will be revisited during recovery to help identify opportunities to incorporate mitigation in the recovery and rebuilding process.

The FEMA publication "Pre-Disaster Recovery Planning Guide for State Governments" notes: "…much of the research involved in the development of mitigation plans can be used to inform the pre-disaster recovery planning effort.

"The pre-disaster recovery planning process will benefit from and build upon hazard mitigation as:

- The mitigation planning process identifies local hazards, risks, exposures, and vulnerabilities;
- Implementation of mitigation policies and strategies will reduce the likelihood or degree of disaster related damage, decreasing demand on resources post-disaster;
- The process will identify potential solutions to future anticipated community problems;
- And mitigation activities will increase public awareness of the need for disaster preparedness."

"Pre-disaster recovery planning efforts also increase resilience by:

- Establishing partnerships, organizational structures, communication resources, and access to resources that promote a more rapid and inclusive recovery process;
- Describing how hazard mitigation will underlie all considerations for reinvestment;
- Laying out a process for implementation of activities that will increase resilience; and

- Increasing awareness of resilience as an important consideration in all community activities."

Continuity of Operations Plans (COOP)
Each department in the City of San Diego is required to maintain a Continuity of Operations Plan (COOP) that details that department's critical functions and how they will protect those functions in order to continue to provide essential services during a disaster or interruption. By defining and describing the hazards facing the City, including frequency and severity, the HIRA informs agency COOP plans by giving context to what types of disasters of interruptions are most likely to occur.

Training and Exercise Plan
Training on hazard mitigation principles and procedures should be included in the City's training and exercise planning. Any training and exercise needs identified in the Capabilities Assessment and Mitigation Strategy can be incorporated in the City's training and exercise planning.

Public Awareness and Education Programs
The jurisdictions' ongoing public education and outreach efforts should reflect the hazards and vulnerabilities described in this Plan. In addition to preparing for disasters, public education should include ways in which the public can reduce their vulnerability to natural and human caused hazards. Furthermore, mitigation activities and success stories should be communicated to the public to show the benefits of effective mitigation planning.

Additional Implementations

In addition to the actions taken in this update, the City of San Diego continues to conduct various preparedness and planning activities related to all hazards. This includes ongoing training and exercises covering a broad range of applicable topics related to natural and man-made disaster, power and essential services disruption, anti-terrorism, CBRNE, explosive device mitigation, counter sUAS, active shooter, civil unrest, cyber disruption, and public health threat response.

All training is structured to introduce best practice, emphasis, develop, and instill capability for those involved utilizing core tenants and key principles of leadership and emergency management codified in the National Incident Management System and Incident Command System (NIMS/ICS).

The San Diego Regional THIRA comprehensively provides mechanism for continuous hazard and threats mitigation. This ongoing assessment of regional threat and hazard identification, probability, impact and mitigation capability serve as a basis for our training scenarios, planning, and resource requirements. This ensures our ability to best address applicable hazards and threats to our region based on the National Preparedness Goal, its five mission areas and 32 core capabilities. Scenarios driven by the THIRA process are based on notional or real-world/recent events, vetted, and observed by outside examiners and/or subject matter experts.

The City has well established Tsunami evacuation routes with associated Public Outreach Plan and is a designated National Weather Service/National Oceanographic and Atmospheric Agency (NWS/NOAA) certified Tsunami/Storm Ready Jurisdiction that routinely participates in enhanced engagement with NWS as a registered NWS Ambassador.

We are a partner in the Regional Cyber Disruption Plan, participate in the State committee Public Outreach for drought, collaborate with the Earthquake Engineering Institute, partner with County Cool Zones, maintain a 100-yr Flood Plan, and a robust Wildfire Urban Interface (WUI) Plan and supporting programs.

Prioritized Mitigation Actions

The prioritized actions below reflect progress in local mitigation efforts as well as changes in development.

Implementation consists of identifying who is responsible for which action, type of funding mechanisms and resources available or will be pursued, and when the action will be completed. The **12** prioritized mitigation actions as well as an implementation strategy for each are:

1. **Action** 1.A.1 - Develop a comprehensive approach to educating the public of the importance of "defensible space" for protection of their homes and property.

Coordinating Department/Organization: Fire Rescue

Potential Funding Source: General Fund

Implementation Timeline: On-going

Hazard Addressed: Wildfire Structural Fire

2. **Action** 3.A.1 - Perform brush management activities within the open space, public owned brush management zone, on a bi-annual basis.

Coordinating Department/Organization: Fire Rescue

Potential Funding Source: General Fund

Implementation Timeline: On-going

Hazard Addressed: Wildfire Structural Fire

3. **Action** 3.A.2 - Maintain bush management inspection cycle of 42,505 parcels that are divided into 19 inspection areas and accomplished every 3.8 years.

Coordinating Department/Organization: Fire Rescue

Potential Funding Source: General Fund

Implementation Timeline: On-going

Hazard Addressed: Wildfire Structural Fire

4. **Action** 3.A.3 - Create buffer zones around residential and non-residential structures through the removal or reduction of flammable vegetation, including vertical clearance of tree branches and removing dead or dry leaves, needles, twigs, and combustibles from roofs, decks, eaves, porches, and yards.

Coordinating Department/Organization: Fire Rescue

Potential Funding Source: General Fund

Implementation Timeline: On-going

Hazard Addressed: Wildfire Structural Fire

5. **Action** 3.A.4 - Create buffer zones around power lines, oil and gas lines, and other infrastructure systems, including replacing flammable vegetation with less flammable.

Coordinating Department/Organization: Fire Rescue

Potential Funding Source: General Fund

Implementation Timeline: On-going

Hazard Addressed: Wildfire Structural Fire

6. **Action** 3.A.5 - Maintain critical water and wastewater services to the region through effective critical infrastructure management, to include the use of multi-source power distribution systems, installation and maintenance of permanent alternate power generators at all plants and pumping stations, and the further development of redundancies in the data transmission of control systems.

Coordinating Department/Organization: Public Utilities

Potential Funding Source: General Fund

Implementation Timeline: On-going

Hazards Addressed: Drought/Extreme Heat

7. **Action** 4.A.2 – Support water conservation policies and programs to enforce water use restrictions. These include municipal code enforcement and other restrictions on outdoor water use and indoor practices to mitigate the effects of severe weather and drought.

Coordinating Department/Organization: Public Utilities

Potential Funding Source: General Fund

Implementation Timeline: On-going

Hazards Addressed: Drought/Extreme Heat

8. **Action** 4.A.1 – Enhance existing City partnerships with appropriate local agencies, community support groups, and service providers to better mitigate hazards that may increasingly result from severe weather and/or climate change.

Coordinating Department/Organization: Office of Emergency Services

Potential Funding Source: General Fund

Implementation Timeline: On-going

Hazards Addressed: Drought/Extreme Heat/All Hazards

9. **Action** 6.A.1 – Work with U.S. Fish and Wildlife (USFWS), U.S. Army Corps of Engineers (USACE), and other federal, state, and local agencies to restore the conveyance capacity of the following channels by removing deposited sediment, trash and accumulated vegetation, to restore original channel cross sections: Cowles Mountain/San Carlos, Alvarado (Section 59 and 60 and 61-63), Industrial Court, Smythe, Auburn, Jamacha, Rancho Bernardo, South Chollas, Solola/Cottonwood, Sweetwater, and Tijuana River Valley.

Coordinating Department/Organization: Transportation/Storm Water

Potential Funding Source: General Fund/Public Assistance

Implementation Timeline: On-going

Hazard Addressed: Flooding

10. **Action** 6.A.2 - Participate in the National Flood Insurance Program (NFIP) and meet the requirements for conformance with NFIP standards.

Coordinating Department/Organization: Transportation Storm Water

Potential Funding Source: General Fund

Implementation Timeline: On-going

Hazard Addressed: Flooding

11. **Action** 5.A.1 – Take actions to safeguard against dam failure, to include supporting public awareness initiatives, initiating structural studies and improvements in coordination with the State's Division of Safety of Dams, and maintaining effective disaster planning in collaboration with local, state, and federal agencies.

Coordinating Department/Organization: Public Utilities

Potential Funding Source: General Fund/Mitigation Grants

Implementation Timeline: On-going

Hazard Addressed: Earthquake

12. **Action** 2.A.1 – Strengthen City and region-wide threat and hazard identification through the use of a Risk Management Project that enables regional stakeholders to utilize and assess quantitative and qualitative data, e.g. Critical Infrastructure/Key Resources (CIKR) databases, relative risk rankings of CIKR sites, core capability assessments, etc.

Coordinating Department/Organization: Office of Emergency Services

Potential Funding Source: General Fund

Implementation Timeline: On-going

Hazards Addressed: All

7. SECTION SEVEN: Keep the Plan Current

Hazard Mitigation Plan maintenance is the process the planning team establishes to track the plan's implementation progress and to inform the plan update. The plan must include a description of the method and schedule for monitoring, evaluating, and updating it within a 5-year cycle. These procedures help to:

- Ensure that the mitigation strategy is implemented according to the plan.
- Provide the foundation for an ongoing mitigation program in your community.
- Standardize long-term monitoring of hazard-related activities.
- Integrate mitigation principles into community officials' daily job responsibilities and department roles.
- Maintain momentum through continued engagement and accountability in the plan's progress.

Hazard Mitigation Plan updates provide the opportunity to consider how well the procedures established in the previously approved plan worked and revise them as needed. This annex is part of the most recent *San Diego County Multi-Jurisdictional Hazard Mitigation Plan* update. The plan was last updated in 2018. See the *San Diego County Multi-Jurisdictional Hazard Mitigation Plan* for more information.

7.1. Mitigation Action Progress

Plan monitoring means tracking the implementation of the plan over time. The plan must identify how, when, and by whom the plan will be monitored.

Following the 2018 Hazard Mitigation Plan update, the planning team convened to talk through new ideas to pull into future updates, including updated best practices, policy, and improvements in coordination and operation for all stakeholders involved with the plan. The planning team worked with city departments and stakeholder agencies to review, monitor, and evaluate the 2018 HMP.

Following this 2023 update, the planning team will support the integration of this HMP into other City plans. Throughout the update cycle for these additional City plans, the planning team will gather information that will be relevant to incorporate into future HMP updates.

Existing City of San Diego Plans	Implementation & Integration
Dam Emergency Action Plans (EAP)	Various dam locations - 2022 update - outlines the thresholds, hazards, and response process.
Climate Action Plan - 2022	Mitigation plan to guide and transition the City of San Diego into a Net Zero emissions municipality by 2035
Emergency Operations Plan (EOP)	Outlines response considerations for any emergency affecting the City of San Diego, currently under revision.
Continuity of Operations Plan (COOP)	Outlines the core responsibilities for an organization and how to ensure City operations continue during and after an interruption in service, caused by a disaster, emergency or other cause.
City's General Plan and Action Plan	Both the General Plan and Action Plan contain policies that place consideration of future development, hazard assessment and limit development in areas with identified hazards. (Adopted in 2008 with a 20-to-30-year horizon for City growth and development, sections are updated as needed).

HMP 2015 UPDATE (APPROVED BY FEMA 2018)

The City of San Diego has developed the following **6** Goals for their Hazard Mitigation Plan.

Goal 1. Promote public understanding, support, and demand for hazard mitigation.

Goal 2. Improve hazard mitigation coordination and communication with federal, state, local, and tribal governments.

Goal 3. Reduce the possibility of damage and losses to people, critical facilities/infrastructure, and State-owned facilities, due to wildfire/structural fire, coastal storms/erosion/ tsunami, landslide, hazardous materials, and other manmade hazards.

Goal 4. Reduce the possibility of damage and losses to people, critical facilities/infrastructure and State-owned facilities due to severe weather (e.g., El Nino storms, thunderstorms, lightning, tsunami, and extreme heat and drought).

Goal 5. Reduce the possibility of damage and losses to people, critical facilities/infrastructure and State-owned facilities due to earthquake and dam failure.

Goal 6. Reduce the high probability of damage and losses to people, critical facilities/ infrastructure and State-owned facilities due to floods.

The City of San Diego developed the following broad list of objectives, and action items to assist in achieving and implementing each of its **six** identified hazard mitigation goals.

Goal 1: Promote public understanding, support and demand for hazard mitigation.	
Objective 1.A: *Promote partnerships between the state, counties, local and tribal governments to identify, prioritize, and implement mitigation actions.*	
Action 1.A.1	Develop a comprehensive approach to educating the public of the importance of "defensible space" for protection of their homes and property.

Goal 2: Improve hazard mitigation coordination and communication with federal, state, local, and tribal governments.	
Objective 2.A*: Establish and maintain closer working relationships with state agencies, local, and tribal governments.*	
Action 2.A.1	Strengthen the development and enhancement of standardized City Emergency Operations Plan(s), and ensure they are coordinated with the appropriate County- wide Emergency Operations Plan(s).
Action 2.A.2	Enhance operating the City's Emergency Operations Center (EOC) and Department Operations Centers (DOC) following the Standardized Emergency Management System (SEMS) and Incident Command System (ICS). This includes training multiple staff members for each position in the EOC.
Action 2.A.3	Strengthen City and region-wide threat and hazard identification through the use of a Risk Management Program that enables regional stakeholders to utilize and assess quantitative and qualitative data, e.g. Critical Infrastructure/Key Resources (CIKR) databases, relative risk rankings of CIKR sites, core capability assessments, etc.

Goal 3: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and State-owned facilities, due to <u>wildfire/structure fire,</u> <u>coastal storms/erosion/tsunami, landslide, hazardous materials, and other manmade hazards</u>.	
Objective 3.A*: Develop a comprehensive approach to reducing the possibility of damage and losses due to <u>wildfire/structural fire, coastal storms/erosion/tsunami, landslide, hazardous</u> <u>materials, and manmade hazards</u>.*	
Action 3.A.1	Perform brush management activities within the open space, public owned brush management zone, on a bi-annual basis.

Action 3.A.2	Maintain brush management inspection cycle of 42,505 parcels that are divided into 19 inspection areas and accomplished every 3.8 years.
Action 3.A.3	Create buffer zones around residential and non-residential structures through the removal or reduction of flammable vegetation, including vertical clearance of tree branches and removal of dead or dry leaves, needles, twigs, and combustibles from roofs, decks, eaves, porches, and yards.
Action 3.A.4	Create buffer zones around power lines, oil and gas lines, and other infrastructure systems, including replacing flammable vegetation with less flammable.
Action 3.A.5	Maintain critical water and wastewater services to the region through effective critical infrastructure management, to include the use of multi- source power distribution systems, installation and maintenance of permanent alternate power generators at all plants and pumping stations, and the further development of redundancies in the data transmission of control systems.

Goal 4: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and State-owned facilities, due to severe weather (e.g., El Nino storms/, thunderstorms, lightning, tsunami, and extreme heat and drought)	
Objective 4.A: Develop a comprehensive approach to reducing the possibility of damage and losses due to severe weather.	
Action 4.A.1	Enhance procedures to better support storm mitigation measures including identifying coastal inundation zones, evacuation routes, alert warning notification procedures, staging areas, temporary shelters, community engagement, public information requirements, and enhancing collaboration with local, state and federal partners.
Action 4.A.2	Update the Land Development Code to require private development in the coastal zone to elevate storm drains above anticipated sea level rise along the San Diego coastline.
Action 4.A.3	Enhance existing City partnerships with appropriate local agencies, community support groups, and service providers to better mitigate hazards that may increasingly result from severe weather and/or climate change.
Action 4.A.4	Support water conservation policies and programs to enforce water use restrictions. These include municipal code enforcement and other restrictions on outdoor water use and indoor practices to mitigate the effects of severe weather and drought.

Goal 5: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and State- owned facilities, due to <u>earthquake and dam failure</u>.	
Objective 5.A: Develop a comprehensive approach to reducing the possibility of damage and losses due to earthquake and dam failure.	
Action 5.A.1	Complete a seismic retrofit of the California Tower section of the Museum of Man in Balboa Park.
Action 5.A.2	Take actions to safeguard against dam failure, to include supporting public awareness initiatives, initiating structural studies and improvements in coordination with the State's Division of Safety of Dams, and maintaining effective disaster planning in collaboration with local, state, and Federal agencies.
Action 5.A.3	Enhance the means of providing water for fire-fighting when service is disrupted because of earthquake.

Goal 6: Reduce the high probability of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and State-owned facilities, due to <u>floods</u>.	
Objective 6.A: Develop a comprehensive approach to reducing the high probability of damage and losses due to floods.	
Action 6.A.1	Work with U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), and other Federal, State, and local agencies to restore the conveyance capacity of the following channels by removing deposited sediment, trash and accumulated vegetation to restore original channel cross sections: Cowles Mountain/San Carlos, Alvarado (Section 59 and 60 and 61-63), Industrial Court, Smythe, Auburn, Jamacha, Rancho Bernardo, South Chollas, Solola/Cottonwood, Sweetwater, and Tijuana River Valley.
Action 6.A.2	Support a "Green Street" ordinance to protect and improve water quality of rivers, creeks, bays, and the ocean by reducing pollutants in compliance with water quality regulations and orders.
Action 6.A.3	Participate in the National Flood Insurance Program (NFIP) and meet the requirements for conformance with NFIP standards.

Action Item #	Priority Action Item #	Status of 2015 Plan Update Approved by FEMA 2018
1.A.1	1	FIRE – ONGOING 2023 PLAN
2.A.1	17	COMPLETED 6/5/17
2.A.2	18	COMPLETED 9/8/16
2.A.3	19	OES CHANGED TO 2.A.1 FOR 2023 UPDATE
3.A.1	2	FIRE – ONGOING 2023 PLAN
3.A.2	3	FIRE – ONGOING 2023 PLAN
3.A.3	4	FIRE – ONGOING 2023 PLAN
3.A.4	5	FIRE – ONGOING 2023 PLAN
3.A.5	6	PUBLIC UTILITIES – ONGOING 2023 PLAN
4.A.1	13	COMPLETED 8/3/17
4.A.2	9	NOT COMPLETED 10/26/15 – NOT PRACTICAL TO ACCOMPLISH
4.A.3	8	OES CHANGED TO 4.A.1 FOR 2023 UPDATE
4.A.4	7	PUBLIC UTILITIES CHANGED TO 4.A.2 FOR 2023 UPDATE
5.A.1	16	COMPLETED 2/26/21
5.A.2	15	PUBLIC UTILITIES CHANGED TO 5.A.1 FOR 2023 UPDATE
5.A.3	14	COMPLETED 10/6/20
6.A.1	10	TSW – ONGOING 2023 PLAN
6.A.2	12	COMPLETED 6/30/18
6.A.3	11	TSW CHANGED TO 6.A.2 FOR 2023 UPDATE

COMPLETED AND DELETED MITIGATION ACTIONS FROM THE 2015 HMP (APPROVED BY FEMA 2018)

The Action Items removed did not match the current priorities for this plan update. For the actions carried over, the naming convention was changed based on the new plan.

The **19** prioritized mitigation actions as well as an implementation strategy for each are:

1. **Action** 1.A.1 - Develop a comprehensive approach to educating the public of the importance of "defensible space" for protection of their homes and property.

   Coordinating Department/Organization: Fire Rescue

   Potential Funding Source: General Fund

   Implementation Timeline: On-going

2. **Action** 3.A.1 - Perform brush management activities within the open space, public owned brush management zone, on a bi-annual basis.

   Coordinating Department/Organization: Fire Rescue

   Potential Funding Source: General Fund

   Implementation Timeline: On-going

3. **Action** 3.A.2 - Maintain bush management inspection cycle of 42,505 parcels that are divided into 19 inspection areas and accomplished every 3.8 years.

   Coordinating Department/Organization: Fire Rescue

   Potential Funding Source: General Fund

   Implementation Timeline: On-going

4. **Action** 3.A.3 - Create buffer zones around residential and non-residential structures through the removal or reduction of flammable vegetation, including vertical clearance of tree branches and removing dead or dry leaves, needles, twigs, and combustibles from roofs, decks, eaves, porches, and yards.

   Coordinating Department/Organization: Fire Rescue

   Potential Funding Source: General Fund

   Implementation Timeline: On-going

5. **Action** 3.A.4 - Create buffer zones around power lines, oil and gas lines, and other infrastructure systems, including replacing flammable vegetation with less flammable.

   Coordinating Department/Organization: Fire Rescue

   Potential Funding Source: General Fund

   Implementation Timeline: On-going

6. **Action** 3.A.5 - Maintain critical water and wastewater services to the region through effective critical infrastructure management, to include the use of multi-source power distribution systems, installation and maintenance of permanent alternate power generators at all plants and pumping stations, and the further development of redundancies in the data transmission of control systems.

   Coordinating Department/Organization: Public Utilities

   Potential Funding Source: General Fund

   Implementation Timeline: On-going

7. **Action** 4.A.4 – Support water conservation policies and programs to enforce water use restrictions. These include municipal code enforcement and other restrictions on outdoor water use and indoor practices to mitigate the effects of severe weather and drought.

   Coordinating Department/Organization: Public Utilities

   Potential Funding Source: Budgeted

   Implementation Timeline: On-going (Changed to 4.A.2 for 2023 plan)

8. **Action** 4.A.3 – Enhance existing City partnerships with appropriate local agencies, community support groups, and service providers to better mitigate hazards that may increasingly result from severe weather and/or climate change.

   Coordinating Department/Organization: Office of Emergency Services

   Potential Funding Source: General Fund

   Implementation Timeline: On-going (Changed to 4.A.1 for 2023 Plan)

9. **Action** 4.A.2 - Update the Land Development Code to require private development in the coastal zone to elevate storm drains above anticipated sea level rise along the San Diego coastline.

   Coordinating Department/Organization: Planning

   Potential Funding Source: General Fund

   Implementation Timeline: Not completed 10/26/15 (not practical to implement)

10. **Action** 6.A.1 – Work with U.S. Fish and Wildlife (USFWS), U.S. Army Corps of Engineers (USACE), and other federal, state, and local agencies to restore the conveyance capacity of the following channels by removing deposited sediment, trash and accumulated vegetation, to restore original channel cross sections: Cowles Mountain/San Carlos, Alvarado (Section 59 and 60 and 61- 63), Industrial Court, Smythe, Auburn, Jamacha, Rancho Bernardo, South Chollas, Solola/Cottonwood, Sweetwater, and Tijuana River Valley.

    Coordinating Department/Organization: Transportation/Storm Water

    Potential Funding Source: General/Public Assistance

    Implementation Timeline: On-going

11. **Action** 6.A.3 - Participate in the National Flood Insurance Program (NFIP) and meet the requirements for conformance with NFIP standards.

    Coordinating Department/Organization: Transportation Storm Water

    Potential Funding Source: General Fund

    Implementation Timeline: On-going (Changed to 6.A.2 for 2023 plan)

12. **Action** 6.A.2 - Support a "Green Street" ordinance to protect and improve water quality of rivers, creeks, bays, and the ocean by reducing pollutants in compliance with water quality regulations and orders.

    Coordinating Department/Organization: Transportation/Storm Water

    Potential Funding Source: General Fund

    Implementation Timeline: Completed 6/30/18

13. **Action** 4.A.1 – Enhance procedures to better support storm preparedness measures, including identifying coastal inundation zones, evacuation routes, alert warning notification procedures, staging areas, temporary shelters, community engagement, public information requirements, and enhancing collaboration with local, state, and federal partners.

    Coordinating Department/Organization: Office of Emergency Services

    Potential Funding Source: General Fund

    Implementation Timeline: Completed 8/3/17

14. **Action** 5.A.3 – Enhance the means of providing water for firefighting when service is disrupted because of earthquake.

    Coordinating Department/Organization: Fire Rescue

    Potential Funding Source: General Fund

    Implementation Timeline: Completed 10/6/20

15. **Action** 5.A.2 – Take actions to safeguard against dam failure, to include supporting public awareness initiatives, initiating structural studies and improvements in coordination with the State's Division of Safety of Dams, and maintaining effective disaster planning in collaboration with local, state, and federal agencies.

    Coordinating Department/Organization: Public Utilities

    Potential Funding Source: General Fund/Mitigation Grants

    Implementation Timeline: On-going (Changed to 5.A.1 for 2023 plan)

16. **Action** 5.A.1 - Complete a seismic retrofit of the California Tower section of the Museum of Man in Balboa Park.

    Coordinating Department/Organization: Park and Recreation

    Potential Funding Source: Mitigation Grant Funded

    Implementation Timeline: Completed 2/26/21

17. **Action** 2.A.1 – Strengthen the development and enhancement of standardized City Emergency Operations Plan (s), and ensure they are coordinated with the appropriate County-wide Emergency Operations Plan (s).

    Coordinating Department/Organization: Office of Emergency Services

    Potential Funding Source: General Fund

    Implementation Timeline: Completed 6/5/17

18. **Action** 2.A.2 – Enhance operating the City's Emergency Operations Center (EOC), and Department Operations Centers (DOC) following the Standardized Emergency Management System (SEMS) and Incident Command System (ICS). This includes training multiple staff members for each position in the EOC.

    Coordinating Department/Organization: Office of Emergency Services

    Potential Funding Source: General Fund

    Implementation Timeline: Completed 9/8/16

19. **Action** 2.A.3 – Strengthen City and region-wide threat and hazard identification through the use of a Risk Management Project that enables regional stakeholders to utilize and assess quantitative and qualitative data, e.g. Critical Infrastructure/Key Resources (CIKR) databases, relative risk rankings of CIKR sites, core capability assessments, etc.

    Coordinating Department/Organization: Office Emergency Services

    Potential Funding Source: General Fund

    Implementation Timeline: On-going (**Changed to 2.A.1 for 2023 plan**)

7.2. Plan Update Evaluation

Plan Section	Considerations	Explanation
Planning Process	Should new jurisdictions and/or districts be invited to participate in future plan updates?	Yes, as new business and/or community sector organizations form during the next project period.
	Have any internal or external agencies been invaluable to the mitigation strategy?	City of San Diego Development Services Dept. City of San Diego Fire Dept. City of San Diego General Services Dept. City of San Diego Information Technology Dept. San Diego Geographic Information Source City of San Diego Parks & Recreation Dept. City of San Diego Public Utilities Dept. California Department of Water Resources American Red Cross California Department of Forestry and Fire Protection
	Can any procedures (e.g., meeting announcements, plan updates) be done differently or more efficiently?	Yes, the continuance of virtual meetings developed during the worldwide pandemic.
	Has the Planning Team undertaken any public outreach activities?	Yes, a variety of outreach activities continue to be developed and implemented and are ongoing.
	How can public participation be improved?	Public participation may be improved with continued partner outreach, seminars, surveys, public education opportunities/presentations and other methods (both virtual and in-person) outlined in Section 6 of this plan.
	Have there been any changes in public support and/or decision- maker priorities related to hazard mitigation?	Yes, the worldwide pandemic saw several conflicting priorities related to public mitigation support.
Capability Assessment	Have jurisdictions adopted new policies, plans, regulations, or reports that could be incorporated into this plan?	Yes, updated hazard mitigation plans are part of an ongoing aspect of San Diego's mitigation efforts.
	Are there different or additional administrative, human, technical, and financial resources available for mitigation planning?	Potentially, as staff positions change, and budget priorities shift, this capability may see some limitation of available resources.
	Are there different or new education and outreach programs and resources available for mitigation activities?	San Diego has begun conversations regarding how to incorporate new outreach programs and resources into its mitigation activities.
	Has NFIP participation changed in the participating jurisdictions?	No change noted.
Risk Assessment	Has a natural and/or technical or human-caused disaster occurred?	Worldwide SARS CoV-2 viral pandemic.

Risk Assessment	Should the list of hazards addressed in the plan be modified?	Not currently. The Planning Team will continue to monitor, assess, and update as needed.
	Are there new data sources and/or additional maps and studies available? If so, what are they and what have they revealed? Should the information be incorporated into future plan updates?	As new sources of GIS products, and technological tools (mobile apps, etc.) emerged, they have been identified and incorporated in the plan.
	Do any new critical facilities or infrastructure need to be added to the asset lists?	Not currently. The Planning Team will continue to monitor, assess, and update as needed.
	Have any changes in development trends occurred that could create additional risks?	Changes to development and land use planning is included in Plan considerations. These potential changes will be included for monitoring and projection of any future mitigation risks.
	Are there repetitive losses and/or severe repetitive losses to document?	Yes. According to the 2022 FEMA Repetitive Loss Summary Report, the City of San Diego had 47 Repetitive Loss properties, and 4 Severe Repetitive Loss properties.

Table 14: FEMA LOCAL MITIGATION PLANNING HANDBOOK WORKSHEET 7.2 DATA.

Plan Section	Considerations	Explanation
Mitigation Strategy	Is the mitigation strategy being implemented as anticipated? Were the cost and timeline estimates accurate?	Yes
	Should new mitigation actions be added to the Action Plan? Should existing mitigation actions be revised or eliminated from the plan?	Not currently. The Planning Team will continue to monitor, assess, and update as needed.
	Are there new obstacles that were not anticipated in the plan that will need to be considered in the next plan update?	Not currently. The Planning Team will continue to monitor, assess, and update as needed.
	Are there new funding sources to consider?	Not currently. The Planning Team will continue to monitor, assess, and update as needed.
	Have elements of the plan been incorporated into other planning mechanisms?	Yes, there is a strong connection between mitigation planning and San Diego's General Plan. Several plans are used to inform the HazMit plan, including the THIRA, Response and Recovery Plans. Please see the comprehensive list under Section 6 titled "Prioritization and Implementation of Action Items."
Plan Maintenance Procedures	Was the plan monitored and evaluated as anticipated?	Yes
	What are needed improvements to the procedures?	Continued monitoring and evaluation by our Office of Emergency Services during the next project period.

TABLE 15: FEMA LOCAL MITIGATION PLANNING HANDBOOK WORKSHEET 7.2 DATA CONTINUED